

# Gifted and Talented Students

Meeting Their Needs in  
New Zealand Schools



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# Foreword

*Gifted and Talented Students: Meeting Their Needs in New Zealand Schools* aims to support schools in assisting gifted and talented students to reach their full potential academically, emotionally, and socially. By enabling these students to reach their full potential, schools make an important contribution to the Ministry of Education's mission of improving the education performance of all students.

This resource is intended for principals, senior managers, and lead teachers who are responsible for meeting the needs of gifted and talented students. The resource is designed to assist schools in identifying gifted and talented students and in developing guidelines for their learning. It discusses principles and practices in the education of gifted and talented students and presents models that schools can refer to as they review and develop their own approaches to meeting the needs of these students.

The first version of *Gifted and Talented Students: Meeting Their Needs in New Zealand Schools* was published in 2000. Since then, the knowledge base about the importance of identifying gifted and talented students and creating educational programmes that are responsive to their individual needs, strengths, and interests has grown. This updated resource takes this knowledge base into account, supporting schools to better meet the requirements of National Administrative Guideline (NAG) 1 (c) iii, which became effective in January 2005. This NAG requires schools to use good-quality assessment information to identify students who have special needs, including gifted and talented students, and to develop and implement teaching and learning strategies that meet those learning needs.

*Gifted and Talented Students: Meeting Their Needs in New Zealand Schools* advocates an inquiry approach to programme development, recognising that the most effective programmes are developed collaboratively and tailored to the needs of each student. This includes ensuring the programmes are culturally responsive and align with relevant research and Ministry of Education policies, such as those outlined in *The New Zealand Curriculum*, *Ka Hikitia – Managing for Success: The Māori Education Strategy 2008–2012*, the *Pasifika Education Plan 2009–2012*, and in the vision and work programme *Success for All – Every School, Every Child*.

I would like to acknowledge and thank all those who have contributed their experience and expertise to the development of this publication.



**Lesley Longstone**

*Secretary for Education*



# Introduction

One of the great joys and privileges of being a teacher is sharing in the development of a young person's exceptional ability. It is equally gratifying to observe that special ability being realised in adult achievement. Many eminent adults, when asked to identify the critical factors that have contributed to their outstanding accomplishments, comment on the support they had from teachers.

New Zealand teachers are attuned to the needs of individual students and are skilled in student-centred strategies. In addition, the national curriculum allows students to work at levels that match their abilities. The combination of these two elements has the potential to create an effective learning environment for the gifted and talented.

Our national guidelines also explicitly support the education of the gifted and talented. The National Education Guidelines (NEGs) require schools to assist all students to realise their full potential, to identify and remove barriers to achievement, and to identify and support those students with special needs. The National Administration Guidelines (NAGs) require all schools to identify gifted and talented students and to develop and implement appropriate teaching and learning strategies to meet those students' needs.

*Gifted and Talented Students: Meeting Their Needs in New Zealand Schools* provides schools with information from which they can develop their own approaches to meeting the requirements of the national guidelines. It includes a range of perspectives and possibilities to help each school tailor its response to the needs of its students.

Although this resource includes many ideas that will inform classroom practice, its main audience is boards of trustees, principals, and lead teachers – because all of these groups are involved in making decisions that are relevant to gifted and talented students. Schools need a co-ordinated, school-wide approach that provides teachers with a comprehensive understanding of the needs of the gifted and talented and of the strategies required to meet those needs.

Examples that illustrate strategies or elaborate on the approaches outlined in this book can be found on the Ministry of Education's Gifted and Talented online community at <http://gifted.tki.org.nz/>



## What's in this resource?

*Gifted and Talented Students: Meeting Their Needs in New Zealand Schools* describes key ideas and developments in relation to gifted and talented students in New Zealand schools. Each section discusses relevant research and links the research to practical information for schools.

## How is this resource organised?

This introduction describes key policies and research on gifted and talented education in the New Zealand context. The next section, *Getting Started*, provides advice on what schools need to consider as they develop their approach to providing for gifted and talented students.

The main part of this resource is divided into sections according to the five key components of providing effective support for gifted and talented students. (These components are introduced below.) Each of these sections explains the essential aspects of the particular component, describes its place in the school's inquiry, discusses any relevant research, and gives practical advice for schools.

The final part of each section suggests starting points for inquiry, lists relevant readings and resources, and gives a summary. The starters for inquiry consist of questions that schools ask themselves in order to focus their inquiry into where they are now and where they want to be in relation to meeting the needs of gifted and talented students.

The appendices include tools schools can use to review and develop their approaches to gifted and talented education.

## Key components of effective support for gifted and talented students

As schools design, develop, and review how they provide for gifted and talented students, they need to address five key components: the concept of giftedness and talent, the characteristics of gifted and talented students, how to identify them, programmes for these students, and ongoing self-review. These components are based on the writing of McAlpine and Reid (1996) and the findings from the 2008 evaluation report from the Education Review Office (see pages 12–13). As figure 1 shows, all these components are interrelated.

This resource addresses each of the five components individually, while emphasising the relationships between them. It outlines the practical requirements for schools, presents sets of criteria for consideration, and provides useful background information about relevant theories and research.



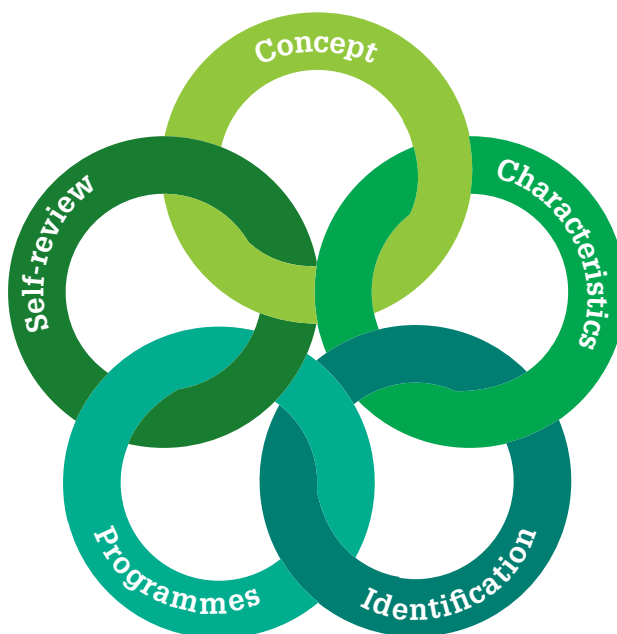


Figure 1. The interrelationships between concept, characteristics, identification, programmes, and self-review<sup>1</sup>

## Policies and research

The New Zealand educational context has experienced significant changes in policy and research between 2000 (when this resource was originally published) and 2012.

Since 2000, New Zealand educators' awareness of the special needs of gifted and talented students has continued to grow. Educators now have a greater understanding of the importance of providing these students with a responsive educational environment that offers them maximum opportunities to develop their special abilities. There is also increased concern that the potential of one of our country's greatest natural resources may go unrealised if we fail to support gifted and talented students appropriately.

### Developments in policy

In 2001, the New Zealand Working Party on Gifted Education was established to provide advice on a policy and funding framework for gifted education. The following year, the Ministry of Education released the working party's recommendations in the document *Initiatives for Gifted and Talented Learners* (Ministry of Education, 2002a). A major outcome of this report was the amendment of NAG 1 (c) iii to include gifted and talented students.

The initiatives included a vision and set of core principles for supporting the achievement and well-being of gifted and talented learners, and these were revised in 2011 by the Gifted and Talented Policy Advisory Group. The revised vision and principles include formal recognition of the Treaty of Waitangi and its implications for ensuring that provisions for gifted and talented education reflect the bicultural foundations of Aotearoa New Zealand.

<sup>1</sup> This diagram is based on the interrelationship of gifted education as described by McAlpine and Reid (1996).

Table 1. Vision and core principles for providing for gifted and talented students

Vision	
Gifted and talented learners are recognised, valued, and empowered to develop their exceptional abilities and qualities through equitable access to differentiated and culturally responsive provisions.	
Core principles for supporting the achievement and well-being of gifted and talented learners	
Embedded	Gifted and talented education is an integral part of all aspects of education in Aotearoa New Zealand.
Professional Capability	The education profession is supported by high-quality teacher education and ongoing professional learning and development in gifted and talented education.
Treaty of Waitangi	Māori principles and values are embodied in all aspects of the education of gifted and talented learners.
High Expectations	Provisions for gifted and talented learners are differentiated in breadth, depth, and pace to ensure opportunities for personal excellence.
Learning to Learn	Gifted and talented learners are given opportunities for developing self-understanding within responsive environments alongside peers who have similar abilities and interests.
Inclusion	There are gifted and talented learners in every demographic of Aotearoa New Zealand and this is reflected in educational policy and practice.
Engagement	Whānau and communities are supported to be engaged in the development of gifted and talented learners.
Evidence	Approaches to providing for gifted and talented learners are based upon relevant research and theory, and are part of regular self-review processes.
Responsive	Provisions for gifted and talented learners, including the twice-exceptional, recognise and respond to their specific abilities and qualities, which may be social, emotional, cultural, creative, cognitive, physical, and/or spiritual.
Coherence	Gifted and talented learners have an education which includes planned progressions, coherent transitions, and clear pathways.
Cultural Diversity	Definitions, characteristics, processes for identification, and programmes for gifted and talented learners reflect New Zealand's cultural diversity.
Future Focus	Gifted and talented learners have opportunities to engage in critical, creative, and caring ways with complex issues shaping their world now and for the future.

These principles require schools to ensure that all of their programmes are responsive, engaging, and inclusive. They must provide for their gifted and talented students in ways that reflect and connect with the following important policy documents and initiatives:

- *The New Zealand Curriculum* and/or *Te Marautanga o Aotearoa*
- *Ka Hikitia – Managing for Success: The Māori Education Strategy 2008–2012*
- *Pasifika Education Plan 2009–2012*
- Success for All – Every School, Every Child.

*The New Zealand Curriculum* and *Te Marautanga o Aotearoa* set national frameworks for curriculum design. However, they allow schools to cater to the particular needs, interests, and talents of individual students. In particular, their identification of five key competencies creates exciting possibilities for developing innovative programmes for gifted and talented students.

*Ka Hikitia – Managing for Success: The Māori Education Strategy 2008–2012* communicates an expectation that schools will provide Māori students with high-quality, culturally responsive education that incorporates their identity, language, and culture and engages their parents, whānau, iwi, and wider communities.

The *Pasifika Education Plan 2009–2012* calls on educators to ensure that Pasifika students and young people are present, engaged, and achieving in education. Like *Ka Hikitia*, it recognises the roles that identity, language, and culture play in educational success.

Success for All – Every School, Every Child is the Government's vision and work programme to achieve a fully inclusive education system by improving inclusive classroom practices and improving special education systems and support.



## Developments in research

Between 2000 and 2011, there was a considerable increase in research into gifted and talented education in New Zealand.

In 2004, the Ministry of Education published the findings of research it had commissioned into how gifted and talented students are identified and supported within New Zealand schools (Riley, Bevan-Brown, Bicknell, Carroll-Lind, and Kearney, 2004). The report concluded that in New Zealand schools, there was:

- growing awareness of the need to provide individualised and appropriate education for gifted and talented students (although progress has been made, the report indicated that this group was still under-served – particularly those from culturally diverse backgrounds, including Māori)
- a need for increased cultural understanding and professional development
- a need for better access to resources, support, funding, and time
- a heavy reliance on teacher nomination and standardised testing to identify gifted and talented students
- a lack of planned, culturally appropriate programmes and provisions
- a tendency to overlook cultural, spiritual, and emotional giftedness
- minimal involvement by parents, caregivers, and whānau.

In 2008, the Education Review Office (ERO) published an evaluation report into how 315 schools provided for the needs of their gifted and talented students (Education Review Office, 2008a). ERO found that only 17 percent of schools had good provision across all five of the key evaluative areas and that these tended to be high-decile schools in urban areas. Thirty-five percent of the schools did not have good provision for gifted and talented students in any of the evaluative areas, and 46 percent had good provision in some areas, but not others.

ERO identified three main stages in schools' progress towards providing effective support for gifted and talented students:

- *developing a shared understanding of gifted and talented education;*
- *implementing good quality provision for gifted and talented students; and*
- *ensuring positive outcomes for gifted and talented students.*

Education Review Office, 2008a, page 1

Having identified some factors that fostered good practice and factors that proved to be challenges, ERO made a number of recommendations. The recommendations for teachers and school leaders are presented in table 2.



*Table 2. ERO's recommendations for teachers and school leaders*

<p>ERO recommends that teachers:</p> <ul style="list-style-type: none"> <li>• communicate, consult, and collaborate with parents, whānau, and the school community to develop a shared understanding of gifted and talented education;</li> <li>• provide challenging and differentiated programmes for gifted and talented students in the regular classroom;</li> <li>• provide appropriate feedback and support for gifted and talented students to achieve in and make progress with their gifts or talents;</li> <li>• develop an understanding that every teacher has responsibility to teach the gifted and talented; and</li> <li>• develop awareness of the particular social and emotional characteristics of gifted and talented students, and promote their holistic wellbeing.</li> </ul>	<p>ERO recommends that school leaders:</p> <ul style="list-style-type: none"> <li>• designate a person or team to lead the school's provision for gifted and talented students and give them support;</li> <li>• develop and foster a school-wide understanding of gifted and talented education;</li> <li>• promote ongoing participation in school-wide professional development, and specialist training and development for people specifically responsible for gifted and talented education;</li> <li>• develop inclusive and appropriate definitions and identification processes for gifted and talented students that reflect student diversity and encompass a variety of gifts and talents; and</li> <li>• institute appropriate self-review processes to determine the effectiveness of provision for gifted and talented students.</li> </ul>
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Education Review Office, 2008a, page 2

Riley and Moltzen (2010) evaluated the effectiveness of five programmes funded by the Ministry of Education. These programmes aimed to benefit gifted and talented students either through direct support or by offering professional development to their teachers. The authors found that:

- there are guiding principles that can be transferred across different contexts and audiences, but a one-size-fits-all approach does not work
- a needs-based approach enables responsiveness to specific stakeholders
- it is essential to establish clear outcomes for both teachers and students
- ongoing evaluation, reflection, and open communication enable improvement and increase the likelihood that the improvement process will be sustainable.

Our understanding of Māori concepts of giftedness has been expanded by research into culturally responsive pedagogy by researchers and writers such as Jill Bevan-Brown, Angus Macfarlane, and Melinda Webber. Such research reinforces the message that responsive learning environments must take into account the diverse identities of students, including their linguistic and cultural backgrounds. However, more work is needed so that we can better understand how to construct responsive learning environments for Māori students.

Other gaps in New Zealand research include how to best address the needs of those gifted and talented students who:

- belong to minority ethnic groups (other than Māori)
- are English language learners
- have special needs
- are from rural New Zealand
- are from low socio-economic backgrounds
- are underachieving students.

These gaps indicate that more research is needed before we can be sure how to effectively support these students to achieve their full potential.

## Starters for inquiry

### How well is your school meeting the needs of your gifted and talented students?

ERO (2008a) identifies three stages for schools in developing effective support for gifted and talented students. (Pages 49–53 of the report give more information on these stages.) This information, together with the recommendations for teachers and school leaders (see table 2 on page 13), could be a useful starting point for discussing how well you are currently catering for your gifted and talented students.

Are you:

- developing shared understandings about what gifted and talented means and how these students can be identified?
- implementing good-quality provision for your gifted and talented students?
- ensuring positive outcomes for your gifted and talented students?

## Readings and resources

A range of resources developed in New Zealand is included throughout this book and in the list of recommended readings on pages 86–89.

The readings and resources referred to in this chapter provide insights into how New Zealand schools are currently providing for the needs of gifted and talented students. The official reports make valuable recommendations.

There are also other useful resources available for parents, whānau, and educators:

- The gifted and talented community on Te Kete Ipurangi (TKI) is constantly developing and expanding. The website provides links to case studies and to online resources for schools, teachers, parents, and whānau. TKI is a good starting point in general for finding out about national and regional organisations, groups of providers, professional associations, parent groups, and universities.



- Another useful website is the one for The Professional Association for Gifted Education (giftEDnz) at [www.giftednz.org.nz/resources.html](http://www.giftednz.org.nz/resources.html)
- *Nurturing Gifted and Talented Children: A Parent-Teacher Partnership* (Ministry of Education, 2008b) gives parents and whānau helpful information about giftedness and talent and suggests ways they can work in partnership with teachers to support the learning of gifted and talented children.

### Summary: Introduction

- Schools are required to identify their gifted and talented students and to develop classroom and school-wide programmes to meet their needs, as well as provide support for teachers and extend knowledge of effective teaching and learning strategies.
- There is a growing body of research about gifted and talented education in New Zealand.
- The evidence from New Zealand-based research shows that currently gifted students tend to be under-served by many schools in the education system, with certain groups, including Māori, often overlooked.
- The increased amount of research in New Zealand means that we can now confidently identify the core principles of effective practice. Those principles provide a platform on which schools can build their approach to supporting their gifted and talented students more effectively.
- There are five interrelated components of providing effective support for gifted and talented students: concept, characteristics, identification, programmes, and self-review.

# Getting started

Developing school guidelines and using a collaborative inquiry approach are both valuable elements in reviewing how well schools are meeting the needs of their gifted and talented students and in creating new principles, programmes, plans, and procedures.

As schools create their guidelines and review their approaches to providing for the gifted and talented, they need to involve the whole school community. A school-wide commitment to catering for the gifted and talented ensures that the impetus for new initiatives and the responsibility for implementation reside with the whole school. Such a shared vision means that programmes for this group of students are more likely to be ongoing and evidence-based, as well as regularly reviewed and improved.

## Developing school guidelines

Developing written guidelines that record their principles, programmes, plans, and procedures for meeting the needs of their gifted and talented students helps schools to establish comprehensive and enduring approaches. While written guidelines do not guarantee appropriate approaches in every classroom, they do ensure that these students' needs remain on the school's agenda. They also provide criteria against which approaches can be reviewed and evaluated.

Schools should develop guidelines in consultation with the wider school community. The parents and whānau of gifted students need to be involved in meaningful ways rather than being simply informed about what is happening. This means making regular consultation with parents and whānau part of the school's ongoing focus on building a partnership with the community. Gifted and talented students can make valuable contributions to the development and review of their education. Schools may also require an outside "expert" to guide them in developing their guidelines.

While there is no single recipe for developing school guidelines, the following are important aspects of both initial development and later review:

- developing a rationale
- identifying the stakeholders
- setting goals and objectives
- making decisions about differentiation
- creating an annual plan.

### Developing a rationale

A useful starting point is to develop a rationale for providing differentially for gifted students. This statement ties in with the school's overall philosophy.

### Identifying the stakeholders

Defining who are the gifted and talented in a school is not an easy task. A school must first arrive at a definition because this provides the basis for identification and for deciding how to provide for these students. (Component 1: Conceptualising giftedness and talent, pages 22–32, provides guidance on developing school-based definitions.)

### Setting goals and objectives

This part of the process not only sets the direction of a school's efforts but also provides criteria against which these efforts can be evaluated. Many schools have discovered the value of using needs analysis as a starting point, determining "where we are at and where we are going". This allows schools to evaluate their current practices and to identify the strengths and interests of staff and other members of the school community. Beginning with a needs analysis is also an excellent way of determining what will be included in a programme of professional learning and development. (For guidance on using needs analysis, see the section Starters for Inquiry on pages 20–21.)

### Making decisions about differentiation

The process of planning and development often begins with debate about how best to provide for gifted and talented students. When making decisions about the appropriateness of approaches such as separate classes, withdrawal programmes, ability grouping, cluster grouping, and so on, it is important to prioritise the needs of the gifted and talented. Their needs should not become subsumed by concerns about charges of elitism, how other students in the school might feel, or the reactions of parents of children not selected for special programmes. (Component 4: Differentiated programmes for gifted and talented students, pages 54–79, provides guidance on developing differentiated programmes.)

### Creating an annual plan

An annual plan of action needs to be developed detailing how the school's goals and objectives will be met. For a co-ordinated and consistent approach, the plan should:

- include a time frame identifying when things will happen, who will be responsible, and how actions will be reviewed
- be linked to the school's overall strategic plan
- be realistic and achievable
- include ongoing self-review processes. (Component 5: Ongoing self-review, pages 80–85, provides guidance on developing ongoing self-review processes.)

(Note that the annual plan needs to link to a long-term vision and a long-term plan.)

### Implementing the guidelines

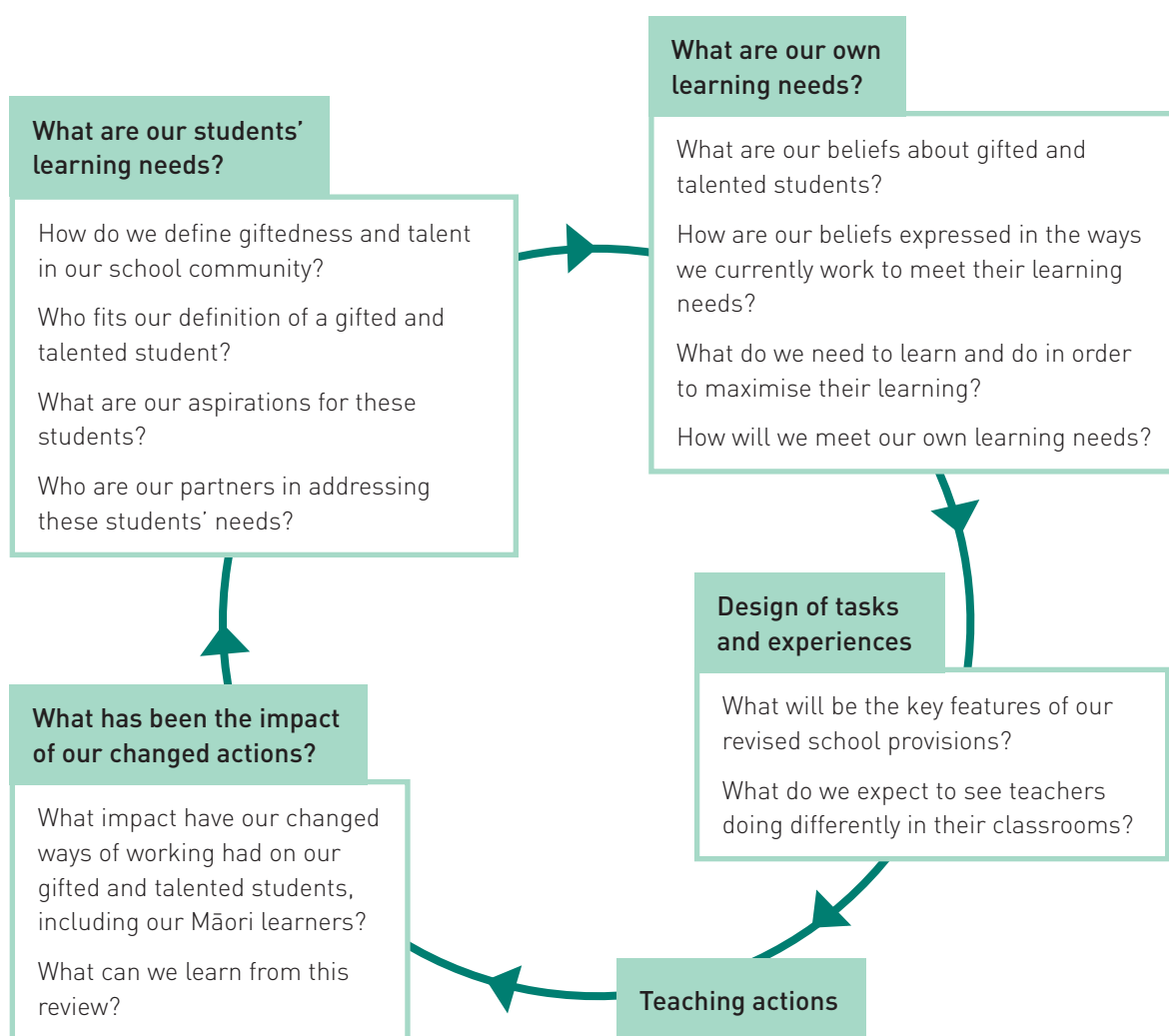
Schools also need to decide who will be responsible for implementing the guidelines. ERO's (2008b) research reinforced the importance of strong leadership. When a member of the school's senior management is involved and when there is a team approach to co-ordination, programmes for the gifted and talented have more chance of being successful.

The team or committee responsible for developing and implementing the guidelines should consult widely – it is essential that the school guidelines are "owned" by the school community, including staff, students, parents, and whānau.

## Using a collaborative inquiry approach

A collaborative inquiry approach to developing and implementing school plans and procedures and classroom programmes ensures a process of self-review that is integrated and ongoing. Such an approach builds participants' knowledge of how to support gifted and talented students most effectively.

The following example of a teacher inquiry and knowledge-building cycle is adapted from the Teacher Professional Learning and Development BES<sup>2</sup> (Timperley, Wilson, Barrar, and Fung, 2007). It suggests some big questions that school communities could use as starting points for developing guidelines and monitoring their implementation.



**Figure 2. An inquiry and knowledge-building cycle for improving provision for gifted and talented students**

<sup>2</sup> That cycle was itself based on the one on the inside front cover of the *Effective Pedagogy in Social Sciences/Tikanga ā Iwi: Best Evidence Synthesis Iteration [BES]* (Aitken and Sinnema, 2008).

## Professional learning and development

Professional learning and development is an essential ingredient in developing, implementing, and maintaining effective programmes for gifted and talented students (Riley and Moltzen, 2010). It is also one of the core principles for gifted and talented education in New Zealand.

Well-planned professional development opportunities for all those involved in education will improve the education of the gifted and talented. Within schools, professional learning and development is necessary to build teacher capability and to build and sustain a coherent school-wide programme.

Educators in New Zealand need specific training and understanding in each of the following areas:

- concepts of giftedness and talent and related behaviours
- identification methods
- programme options and curriculum differentiation
- teaching methods and materials
- working with special populations among the gifted, with particular reference to gender, culture, locality, socio-economic circumstances, and disabilities (learning, behavioural, and/or physical).

For professional learning and development programmes to be effective, the programmes need to:

- actively involve school leaders
- use a collaborative inquiry approach
- be contextually based.

Professional development is more effective when school leaders take active responsibility for its implementation (Robinson, Hohepa, and Lloyd, 2009).

Using a collaborative inquiry approach helps teachers and school leaders to transfer principles of effective practice to the realities of their own school (Timperley et al., 2007).

Professional development in schools needs to be contextually based and to reflect current policies and practices within the school. It is generally accepted that school-based professional development, where the programme reflects the nature and needs of the individual school, is the most effective approach for achieving real change.

## Starters for inquiry

### Tools and checklists

Schools could use one of the three tools described below to help them develop and review their approaches to meeting the needs of gifted and talented students. These tools were developed for the New Zealand educational context.

#### Checklist for schools

A checklist that Tracy Riley developed for the Te Kete Ipurangi website is provided in Appendix 1. It includes questions about a school's rationale and purpose, community consultation, and the five key components of providing effective support. Schools could use this checklist to address, in particular, the fourth set of questions in the inquiry and knowledge-building cycle (page 18).

#### Self-review questions and indicators

ERO (2008a) based its review on the following five evaluation questions:

- *How well does the school leadership support the achievement of gifted and talented students?*
- *How inclusive and appropriate are the school's processes for defining and identifying giftedness and talent?*
- *How effective is the school's provision for gifted and talented students?*
- *How well does the school review the effectiveness of their provision for gifted and talented students?*
- *To what extent do the gifted and talented programmes promote positive outcomes for their gifted and talented students?*

pages 7–8

The reviewers made judgments based on evidence that came from indicators related to the answers to each of the questions. The questions and their related indicators are listed in the appendices to the report.

#### School Support Services' strengths and needs assessment

A strengths and needs assessment tool that was developed by gifted and talented education advisers is provided in Appendix 2. Schools can use this tool to help them review their progress in providing for the needs of gifted and talented students. They can collate information from this review and then use it to develop and update their school guidelines.

### Inquiry into education success for gifted Māori learners

The strategic intent of *Ka Hikitia – Managing for Success: The Māori Education Strategy 2008–2012* (Ministry of Education, 2007a) is for Māori to enjoy education success as Māori. This means:

*having an education system that provides all Māori learners with the opportunity to get what they require to realise their own unique potential and succeed in their lives as Māori.*

page 18



Schools will be engaging in ongoing discussions with Māori students, parents, whānau, and iwi about what “Māori enjoying educational success as Māori” means in their school community. This should include discussion about what gifted Māori learners require in order to “realise their own unique potential and succeed in their lives as Māori.” Inquiry into education success for gifted Māori learners always needs to be part of schools' self-review.

## Readings and resources

The Gifted and Talented community on TKI (<http://gifted.tki.org.nz>) has links to resources that support teachers and school leaders in identifying and planning for the professional learning needs in their school. Similarly, giftEDnz ([www.giftednz.org.nz/resources.html](http://www.giftednz.org.nz/resources.html)) provides links to key resources and other professional associations that can support educators to meet the needs of their gifted and talented students. These web pages also include information about upcoming professional learning opportunities and events.

### Summary: Getting started

- Creating written guidelines with the participation of all those with an interest in the programme, including students and their whānau, helps to ensure comprehensive, enduring, and effective approaches are developed for meeting the needs of gifted and talented students.
- There are five essential aspects of guideline development: developing a rationale, identifying the stakeholders, setting goals and objectives, making decisions about differentiation, and creating an annual plan.
- A collaborative inquiry approach to developing and implementing school guidelines and classroom programmes ensures that self-review is integrated and ongoing.
- Professional development is an essential ingredient in developing, implementing, and maintaining effective programmes for gifted and talented students.



# Component 1: Conceptualising giftedness and talent

One of the first tasks for a school in meeting the needs of gifted and talented students is to define what the school community recognises as giftedness and talent. In doing this, schools may find that there is a range of views on giftedness and talent in their community and in the resources they refer to. They could develop a draft definition that can be reviewed and refined in response to evidence from formal research and the school's own collaborative inquiry.

This section on component 1 presents criteria for developing school-based definitions of giftedness and talent and explores what is meant by multi-categorical definitions and bicultural and multicultural concepts. It then introduces other research and theories that schools should take into account when they are developing their definitions.

## Criteria for developing school-based definitions

While many theories and definitions of giftedness and talent have been developed, there is no universally accepted theory or definition. However, New Zealand policy makers and researchers have developed useful sets of criteria that schools can use as a framework for developing definitions that reflect their individual school communities. The criteria listed below are based on research from the New Zealand Working Party on Gifted Education (2001), Riley et al. (2004), ERO's (2008a) national report, and the expertise of the Ministry of Education Gifted and Talented Advisory Group.

### *Criteria for developing school-based definitions of giftedness and talent*

#### **A school-based definition of giftedness and talent needs to:**

- reflect a multi-categorical approach that includes an array of special abilities
- reflect a bicultural approach that incorporates Māori concepts
- recognise multicultural values, beliefs, attitudes, and customs
- recognise both performance and potential
- acknowledge that gifted and talented students demonstrate exceptionality in relation to their peers of the same age, culture, or circumstances
- provide for differentiated educational opportunities for gifted and talented students, including social and emotional support
- reflect the context and values of the school community
- acknowledge that giftedness is evidenced in all societal groups, regardless of culture, ethnicity, socio-economic status, gender, or disability (learning, physical, or behavioural)
- recognise that a student may be gifted in one or more areas
- recognise that a student's gifts and talents will emerge at times and in circumstances that are unique to that student
- be grounded in sound research and theories.

## A multi-category concept

The description “gifted and talented” applies to a wide range of students with many different abilities and qualities. Some students may have exceptional abilities in science or technology, some in art or poetry, and others in social leadership. It is now generally accepted that the gifted and talented are not only those with high intelligence.

The range of special abilities within conceptions of giftedness and talent includes general intellectual abilities, specific academic aptitude, cultural abilities and qualities, creative abilities, social and leadership abilities, physical abilities, emotional and spiritual qualities, and abilities in the visual and performing arts. The breadth of these qualities and abilities is reflected in the list developed by Riley et al. (2004). They identified the following six broad areas of giftedness and talent.

- **Intellectual/Academic** refers to students with exceptional abilities in one or more of the learning areas (i.e., English, the arts, health and physical education, learning languages, mathematics and statistics, science, social sciences, and technology).
- **Creativity** refers to students with general creative abilities as evidenced in their abilities to problem-find and problem-solve, and their innovative thinking and productivity.
- **Expression** through the visual and performing arts refers to music, dance, drama, and visual arts.
- **Social/Leadership** refers to students with interpersonal and intrapersonal abilities and qualities which enable them to act in leadership roles.
- **Culture-specific abilities and qualities** refers to those valued by the student’s cultural or ethnic group, including traditional arts and crafts, pride in cultural identity, language ability, and service to the culture.
- **Expression through physical/sport** refers to students with excellent physical abilities and skills, as evidenced through sport and/or health and physical education programmes.

Riley et al., 2004, page 176

Both Riley et al. (2004) and ERO (2008a) found that schools often limit their definitions of giftedness and talent to academic domains. Consequently, in just over half of the schools that participated in the ERO review, the diversity of the students identified as gifted and talented did not match the diversity of the school population (ERO, 2008a). The schools with a broader understanding of what it means to be gifted and talented tended to be those that developed their definitions in consultation with parents and whānau.

## A bicultural approach

*Ka Hikitia – Managing for Success* (Ministry of Education, 2007a) provides both a vision of and a guide to what the Treaty of Waitangi means for education in Aotearoa New Zealand. As discussed on pages 20–21 of this resource, *Ka Hikitia* emphasises the right of Māori learners to enjoy education success as Māori. It encourages all those with an interest in Māori education to discuss what this means and to contribute to the achievement of this goal. In individual school communities, those discussions need to include conversations about Māori concepts of giftedness and talent and how these qualities and abilities can be fostered.

### Māori concepts of giftedness

Bevan-Brown (2011) issues a strong warning against cultural stereotyping when exploring Māori concepts of giftedness and talent. She stresses the diversity within Māori society – for example, concepts of giftedness and talent may vary for different iwi and for people living in different circumstances (for example, in rural or urban areas). Nevertheless, her extensive research enables her to suggest eight components of a Māori concept of giftedness. These are listed below.

#### Components of a Māori concept of giftedness

1. *Giftedness is widely distributed in Māori society. It is not bound by social class, economic status, lineage, or gender.*
2. *Giftedness can be exhibited in both individual and group contexts. Also, an individual's gifts and talents can be "owned" by a group.*
3. *The areas of giftedness and talent recognised are broad and wide ranging.*
4. *Importance is placed on both "qualities" and "abilities".*
5. *The concept of giftedness is holistic in nature and inextricably intertwined with other Māori concepts.*
6. *There is an inherent expectation that a person's gifts and talents will be used to benefit others.*
7. *The Māori culture provides a firm foundation on which giftedness is grounded, nurtured, exhibited, and developed.*
8. *Mana tangata<sup>3</sup> is frequently accorded to people with special abilities, especially in the areas of traditional knowledge and service to others.*

Bevan-Brown, 2011, page 11

Some of these concepts – especially those of group giftedness, group ownership of giftedness, and the importance placed on interpersonal and intrapersonal qualities such as service to others and high moral values – are clearly different from traditional Western concepts of giftedness. Other differences may seem less obvious. Bevan-Brown (2011) points out, for example, that while Western definitions often include leadership ability, it can be interpreted and expressed in different ways by people of different cultures. Like Pākehā, Māori value those who lead from the front or by example, but also value those who lead from "behind the scenes".

<sup>3</sup> Mana tangata is the authority or prestige bestowed on an individual or a group by others.

## Multicultural perspectives

New Zealand is already a multicultural society and is becoming increasingly so as changes in demographics increase the ethnic diversity of our population. In particular, a rising percentage of New Zealanders are of Asian or Pasifika descent. Within these groups, some are New Zealand-born and others are migrants, some are English language learners and others are proficient in both English and their home language.

The concept of giftedness and talent varies from culture to culture and is shaped by each group's beliefs, values, attitudes, and customs. It also varies over time and in response to different experiences.

To provide effective support for gifted and talented students, each school needs to incorporate relevant cultural values and conceptions into its definition of giftedness and talent. These values and concepts also influence how schools identify students from different cultural groups and provide relevant programmes. Culturally diverse and economically disadvantaged students are often under-represented in programmes for the gifted and talented. Schools must make a special effort to identify talented students from these groups.

A growing number of New Zealand researchers have joined Bevan-Brown in investigating the relationship between cultural identity and giftedness. A common finding from these researchers is the enormous potential inherent within gifted Māori and Pasifika students, potential that is often not realised (see, for example, Riley et al., 2004).

Bevan-Brown (2009, page 6) suggests a number of questions that teachers can use to understand the influence of culture on interpretations of giftedness. These are listed here and are also referred to in the chapters on the other four key components of providing for gifted and talented students. The questions she suggests for schools are:

*In what areas is giftedness recognised?*

*How is each area of giftedness perceived and demonstrated?*

*What priority is given to each area of giftedness?*

*What are culturally appropriate and effective ways of identifying gifted students?*

*How can gifted students be provided for in a culturally appropriate way?*

Bevan-Brown (2011) also proposes a set of steps for incorporating differing cultural concepts of giftedness. These steps are to:

1. include information about diverse cultures and diverse cultural concepts of giftedness in pre-service and in-service teacher education
2. provide culturally responsive school environments where diverse cultures and values are acknowledged and celebrated, the content and context of learning is relevant for all students, and a wide range of assessment and teaching approaches is utilised
3. facilitate greater involvement from parents, families, and the community.



## Pasifika concepts of giftedness

The Ministry of Education uses the term “Pasifika” to refer to Pacific peoples in New Zealand: those who have migrated from Pacific nations and territories and those who are New Zealand-born but identify as Pasifika through their ancestry. While aspects of Pasifika identity are held in common by these various groups, the Ministry (2009) points out that Pasifika people have diverse cultural identities with multiple world views.

There is growing recognition of the importance of understanding Pasifika concepts of giftedness and talent, but there is very little information based on practice, theory, or research to help teachers find out about those concepts. In the few studies that have investigated Pasifika students and gifted and talented education, the researchers conclude that Pasifika students have been under-represented in programmes for gifted and talented students. (See, for example, Ingrid Frengley-Vaipuna’s 2007 thesis on Tongan students and Max Galu’s 1998 thesis on Māori and Polynesian students.)

The challenge for schools is how to address the under-representation of Pasifika students without a wide base of research and examples from practice to draw from. One approach is to work with parents, families, communities, and gifted and talented students themselves to explore broader concepts of giftedness and talent, while at the same time developing understandings of the multi-ethnic diversity of Pasifika peoples.





## Research and theories to consider

### Maximising potential

Several definitions of giftedness view behaviours as central to the concept. Within these definitions, it is the characteristics and behaviours of people that illustrate giftedness and talent. Hill (1977), for example, states that “Gifted is as gifted does”. Some definitions accept potential as part of their criteria, whereas others focus on performance. The key point for teachers is the need to offer challenging learning experiences so that potential can be realised.

### Promoting social capital

Renzulli (1978) developed a definition of giftedness based on the interaction between three basic clusters of human traits:

- above-average ability
- a high level of task commitment
- a high level of creativity.

Renzulli and Reis (1985) claim that gifted and talented students “are those possessing or capable of developing this composite set of traits and applying them to any potentially valuable area of human performance” (page 28). They emphasise that such students “require a wide variety of educational opportunities and services that are not ordinarily provided through regular instructional programs” (page 28).

This “three-ring concept of giftedness”, with minor adaptations for the New Zealand context, is represented in figure 3. It is placed against a hound’s-tooth background, which represents the interactions between personality and environment that help to develop gifted behaviours.

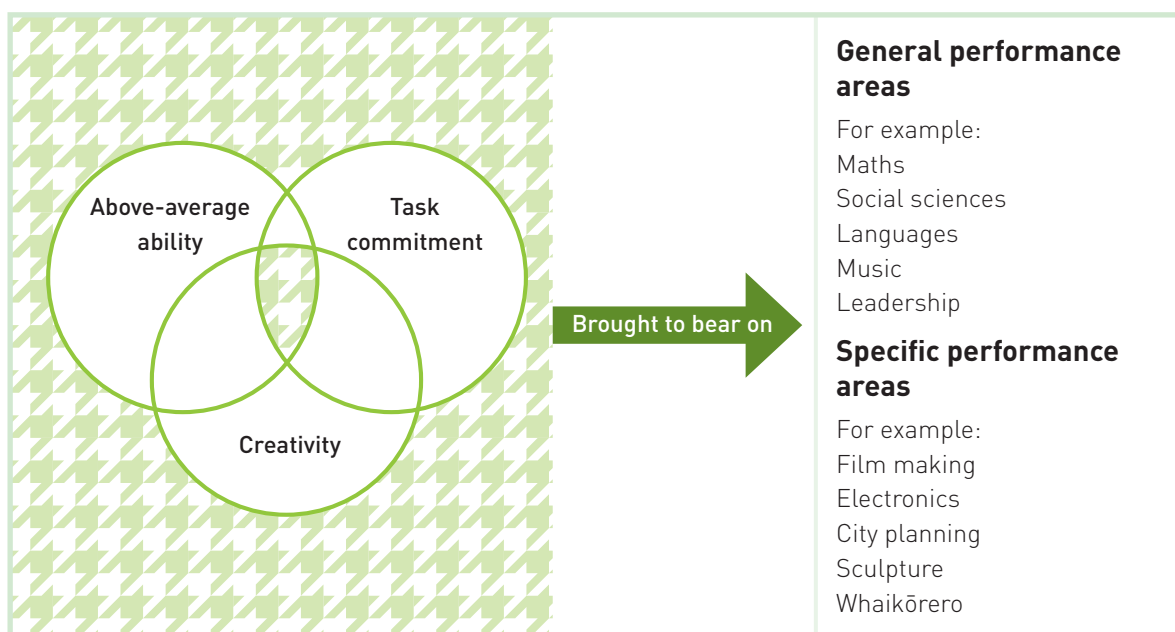


Figure 3. Renzulli's concept of giftedness

Renzulli (2002) and his colleagues have looked more closely at the hound's-tooth background and have identified six components of what he calls "socially constructive giftedness". These are virtues that direct giftedness towards enhancing social capital, "a set of intangible assets that address the collective needs and problems of other individuals and our communities at large" (page 2). Renzulli calls these virtues "co-cognitive factors" because "they interact with and enhance the cognitive traits that we ordinarily associate with success in school and with the overall development of human abilities" (page 5).

The six components (page 4) are:

- optimism
- courage
- romance with a topic or discipline
- sensitivity to human concerns
- physical/mental energy
- vision/sense of destiny.

Renzulli believes that, by developing innovative programmes to foster these virtues, schools can help create leaders who will promote social as well as material and economic gain.



## Differentiating giftedness and talent

The terms “gifted” and “talented” are often used to express one concept. Terms such as G & T, GATE, or GAT are sometimes used to express this single-concept approach. Where the terms are differentiated, giftedness is usually associated with high intelligence or academic aptitude, whereas talent is usually related to a high level of performance in such areas as music, art, craft, dance, or sport.

Gagné developed the Differentiated Model of Giftedness and Talent (2008, 2009) and has argued consistently for differentiating the two terms. He claims that giftedness relates to aptitude domains (intellectual, creative, social, perceptual, muscular, and motor control), while talent is associated more with outstanding achievements in a variety of fields of human endeavour (academic, technical, science and technology, the arts, social service, administration/sales, business operations, games, and sports and athletics). Talent is reserved for a minority of individuals from a larger pool of competent people.

Gagné proposes that catalysts such as motivation, personality traits, or education mediate the transition from giftedness to talent. He divides these catalysts into two broad groups. The catalysts in the first group are intrapersonal traits (physical and mental) and goal management (awareness, motivation, and volition). The second group comprises environmental catalysts such as milieu (physical, cultural, social, familial), the influence of other people (parents, teachers, peers, mentors), and provisions (services and programmes for developing talent, such as enrichment or acceleration).

The element of chance in Gagné’s model qualifies the degree of control an individual has over environmental influences. Within this model, a person may be gifted but not talented. Gagné’s theory acknowledges the developmental processes of the formal and informal learning and practising required for gifts to transform into talents. Teachers and schools have a critical role in creating a learning environment that provides a catalyst for talent to emerge.

## Multiple intelligences

Although it is not a theory of giftedness, Gardner’s (1993a, 1993b, 1998) theory of Multiple Intelligences provides a useful way of incorporating a wide range of ability areas into an explanation of intelligence. Gardner originally described seven kinds of intelligence: linguistic, musical, logical–mathematical, spatial, bodily kinaesthetic, intrapersonal, and interpersonal.

## Starters for inquiry

### How do other schools define giftedness?

One approach to developing a school definition of giftedness and talent is to use the criteria on page 22 to critically examine definitions adopted by other schools and the processes they used to create their definitions. In doing so, schools could ask the key question, “In what areas is giftedness recognised?” (Bevan-Brown, 2009, page 6), and its implicit companion, “What areas of giftedness are being neglected?”

The case studies in Riley et al.’s full report (2004) contain examples of definitions by schools, including the following:

*Children who, given the opportunity [to take part in the gifted and talented programme], are capable of high performance in one or more of the following areas: general intellectual ability; specific academic aptitude; creative or productive thinking; leadership ability; cultural traditions, values & ethics; naturalistic abilities; psychomotor.*

page 221

*Gifted and talented students are those who have potential (gifted) or are performing (talented) well above average in any of the following domains: general intellectual, specific academic, creative or productive thinking, leadership, visual or performing arts, and psychomotor ability.*

page 229

ERO accompanied its 2008a evaluation report with a companion report (2008b) outlining examples of good practice in seven schools. The following is an example of how one school arrived at a definition it could use to identify its gifted and talented students:

*The school’s definition and identification of gifted and talented students evolved from the principal’s vision, expertise in the school and ongoing external advice. The senior management team demonstrated a strong commitment to identifying potential gifted and talented students, particularly those who did not readily display their giftedness. This process involved a strong commitment to listening to parents, through meetings, hui, and fono with parents to explore what was valued as gifted and talented in Māori and Pacific cultures. The school adopted an holistic and a multi-cultural view that incorporated spiritual, emotional, social, physical and intellectual capabilities across different domains. These included:*

- academic;
- bodily-kinaesthetic;
- visual-spatial;
- musical ability;
- creative and thinking skills;
- leadership ability; and
- spirituality and ethics

ERO, 2008b, pages 25–26



## Diverse cultural concepts of giftedness

### Viewing gifted education through cultural lenses

Bevan-Brown's (2009) paper "Identifying and Providing for Gifted and Talented Māori Students" expands on the series of questions she proposes for reviewing gifted education (page 25) and includes information and practical strategies for teachers and school leaders. Guided discussion of this paper could help schools to develop definitions and action plans that adhere to the Ministry of Education core principle that "Māori principles and values are embodied in all aspects of the education of gifted and talented learners".

### Exploring giftedness from a Pasifika viewpoint

The Compass for Pasifika Success (Ministry of Education, 2009) identifies some Pasifika values that school communities can explore in regards to giftedness and talent. It highlights the importance placed upon spirituality, leadership, sense of belonging, relationships, inclusion, service, respect, and reciprocity. Teachers, students, parents, and other Pasifika community members can explore these values and what they mean in terms of Pasifika perspectives.

It is important not to over-generalise; rather, schools need to keep in mind the aspects of Pasifika identity that embody these values and help shape how they are manifested in different students, their families, and their communities. Each individual Pasifika culture will also view and live these values in its own way.

## Readings and resources

The texts listed below are part of the growing research and literature on Māori conceptions of giftedness and talent.

Bevan-Brown, J. (2005). "Providing a Culturally Responsive Environment for Gifted Maori Learners". *International Education Journal*, vol. 6 no. 2, pp. 150–55. Available at <http://ehlt.flinders.edu.au/education/iej/articles/V6n2/Bevan/paper.pdf>

Bevan-Brown, J. (2009). "Identifying and Providing for Gifted and Talented Māori Students". *APEX*, vol. 15 no. 1, pp. 6–20. Available at [www.giftedchildren.org.nz/apex/v15no1.php](http://www.giftedchildren.org.nz/apex/v15no1.php)

Jenkins, H., Macfarlane, A., and Moltzen, R. (2004). "Embracing Māori Giftedness: The Dynamics of Power, Culture, and Visibility". *New Zealand Journal of Educational Studies*, vol. 39 no. 1, pp. 55–70.

Macfarlane, A. and Moltzen, R. (2005). "Whiti ki Runga! Gifted and Talented Māori Learners". *Kairaranga*, vol. 6 no. 2, pp. 7–9.

Mahuika, R. (2007). "Māori Gifted and Talented Education: A Review of the Literature". *MAI Review*, 1, pp. 1–13.

Webber, M. (2011). "Gifted and Proud: On Being Academically Exceptional and Māori". In *Ka Tangi te Titi – Permission to Speak: Successful Schooling for Māori Students in the 21st Century*, ed. P. Whitinui. Wellington: NZCER, pp. 227–241.



Vialle, W., ed. (2011). *Giftedness from an Indigenous Perspective*. Wollongong, NSW: Australian Association for the Education of the Gifted and Talented/Department of Education, Employment, and Workplace Relations. Available at [www.aaegt.net.au/indigenous.htm](http://www.aaegt.net.au/indigenous.htm)

The papers in this collection include several by New Zealand researchers that focus in particular on gifted and talented Māori and Pasifika students.

### Summary: Conceptualising giftedness and talent

- Each school community will develop a definition of giftedness and talent that is based on research and theory and reflects its unique school culture.
- There has been a trend away from defining the gifted and talented in terms of a single category (for example, high intelligence) towards a multi-category approach that acknowledges a diverse range of special abilities and qualities.
- There is a growing body of research into Māori concepts of giftedness and talent, and work is beginning on exploring Pasifika concepts. This provides a basis for school communities to explore these notions within their own contexts.
- Multicultural values, which reflect a range of attitudes to abilities and qualities, form an important component of any concept of giftedness and talent. Identification procedures and programme content should both include multicultural perspectives.
- It is important to recognise potential as well as demonstrated performance. Educators should offer rich and challenging experiences to help realise gifted and talented students' potential.
- Social, emotional, spiritual, and motivational factors are important aspects of giftedness and talent.



## Component 2: Characteristics of gifted and talented students

Sets of characteristics<sup>4</sup> describe the behaviours and qualities that educators, peers, parents, and/or whānau may observe in gifted and talented students. Each school will develop a set of characteristics that reflects its definition of and approach to giftedness and talent. This then becomes a resource for identifying those students who would benefit from the school's gifted and talented programme.

The gifted and talented are not a homogeneous group, and every student possesses a unique blend of traits. However, when we look at gifted and talented students as a group, we can see clusters of common characteristics. Some students show evidence of these characteristics across a number of areas, while others show it in a single endeavour. In the more highly gifted, these traits may be much more marked or intense.

With many gifted and talented students, the behaviours that indicate their exceptional ability may not be readily observable. Some students may not have been provided with experiences in the areas of their giftedness or may not have had opportunities to demonstrate their ability. Others, for a variety of reasons, may be underachieving or deliberately hiding their giftedness. Some gifted and talented students may have learning difficulties that mask their real ability. All students will reveal their abilities differently with different people and in different contexts.

Almost every text ever written on the subject of giftedness contains a list of characteristics associated with the concept. As definitions of giftedness have broadened, so too have the categories of characteristics. Schools should view the list below (McAlpine and Reid, 1996) as a starting point, remembering that this is just one way of categorising characteristics.

No one student is likely to possess all the following characteristics. It would be possible, for example, for a gifted student to show clear evidence of all, or nearly all, the characteristics in one category but few of those in another.

### Learning characteristics

- Displays logical and analytical thinking
- Is quick to see patterns and relationships
- Masters information quickly
- Strives for accurate and valid solutions to problems
- Easily grasps underlying principles
- Likes intellectual challenge
- Jumps stages in learning
- Seeks to redefine problems, pose ideas, and formulate hypotheses
- Finds as well as solves problems
- Reasons things out for her- or himself
- Formulates and supports ideas with evidence

<sup>4</sup> In this resource, the term characteristics is used very broadly to encompass behaviours, qualities, and abilities.

- Can recall a wide range of knowledge
- Independently seeks to discover the why and how of things

## Creative thinking characteristics

- Produces original ideas
- Displays intellectual playfulness, imagination, and fantasy
- Creates original texts or invents things
- Has a keen sense of humour and sees humour in the unusual
- Generates unusual insights
- Enjoys speculation and thinking about the future
- Demonstrates awareness of aesthetic qualities
- Is not afraid to be different
- Generates a large number of ideas
- Is prepared to experiment with novel ideas and risk being wrong
- Seeks unusual rather than conventional relationships

## Motivational characteristics

- Strives for high standards of personal achievement
- Is self-directed
- Is highly self-motivated and sets personal goals
- Is persistent in seeing tasks to completion
- Becomes committed to and absorbed in tasks
- Tends to be self-critical and evaluative
- Is reliable
- Prefers to work independently

## Social leadership characteristics

- Takes the initiative in social situations
- Is popular with peers
- Communicates well with others
- Actively seeks leadership in social situations
- Shows ability to inspire a group to meet goals
- Persuades a group to adopt ideas or methods
- Is self-confident
- Is adaptable and flexible in new situations
- Actively seeks leadership in sporting activities
- Is socially mature
- Is willing to take responsibility
- Synthesises ideas from group members to formulate a plan of action

### Self-determination characteristics

- Is sceptical of authoritarian pronouncements
- Questions arbitrary decisions
- Pushes teachers and adults for explanations
- Displays a precocious interest in “adult” problems
- Is reluctant to practise skills already mastered
- Is easily bored with routine tasks
- Expresses ideas, preferences, and opinions forthrightly
- Relates well to older children and adults and often prefers their company
- Asks searching questions



## Cultural indicators of giftedness

As discussed in the previous chapter, cultures vary in the way they define giftedness and talent. This affects what characteristics each culture sees as signs of exceptional ability. For example, teachers may look for questioning as an indicator of giftedness, but for some Pasifika students, this may not be culturally appropriate. Some multi-categorical approaches to defining giftedness and talent are inclusive and flexible enough to include many cultural perspectives. However, as Bevan-Brown (2009) notes, the essential difference may be in how a special ability is interpreted and manifested in different cultures (see page 24). This illustrates how important it is for schools to consult with their community when they develop sets of characteristics for defining giftedness.

Auckland-based teachers Mahaki and Mahaki (2007) believe that it is essential to take a kaupapa Māori approach to identifying and fostering the potential of gifted Māori learners. Mahaki and Mahaki have developed a list of some of the cultural qualities that are valued by Māori and some of the attributes that are associated with these qualities.<sup>5</sup> The following qualities and attributes from their list may serve as indicators of giftedness and talent:

- Manaakitanga: generosity – honouring, caring, and giving mana to people, thus maintaining your own mana
- Whanaungatanga: family values, relationships
- Wairuatanga: balance – harmony, spirituality, being grounded, calm
- Kaitiakitanga: caretaker/guardianship of knowledge, environment, and resources
- Rangatiratanga: ranga – to weave, tira – a company; leadership that inspires unity
- Mātauranga: knowledge – intellect, thinking skills, wisdom, education, learned, studious
- Te Mahi Rēhia: recreational pursuits – physical and artistic performance
- Tikanga: approved etiquette – correct behaviour, truthful, proper, respectful.

<sup>5</sup> See Appendix 3, pages 109–115, for a reflective tool for recognising Māori giftedness based on the work of Pita Mahaki and Claire Mahaki (2007).

Through consultation with many kaumātua, parents, whānau, and teachers of gifted Māori learners in mainstream, bilingual, and total immersion settings, Bevan-Brown (2009) has compiled the following indicators of giftedness in Māori cultural abilities and qualities:

- *Communicates in te reo Māori clearly, fluently, and flexibly using a variety of advanced language structures and figures of speech;*
- *Can compose, deliver, and respond to a karanga, karakia, mihimihi, or whaikōrero appropriate to the occasion and audience;*
- *Has a broad knowledge of Māori, iwi, and hapū history and tikanga;*
- *Has in depth knowledge of a particular iwi or hapū including their history, tikanga, dialect, and whakatauākī;*
- *Has a broad knowledge of Māori mythology and can interpret myth messages in a contemporary context;*
- *Demonstrates advanced practical and creative ability in some form of Māori art or craft; eg, carving, weaving;*
- *Demonstrates advanced performing and creative ability in some form of Māori music; eg, composes contemporary waiata and haka, has an extensive repertoire of traditional waiata;*
- *Displays advanced ability in Māori games, pastimes and practices; eg, taiaha expertise;*
- *Has a keen interest in and wide knowledge of whānau, hapū, and iwi whakapapa;*
- *Has a deep appreciation of traditional Māori values such as manaakitanga and whanaungatanga and embodies these in word and action;*
- *Has advanced spiritual understanding, perception, appreciation, and ability (wairuatanga) and knowledge of traditional and contemporary karakia;*
- *Has in depth knowledge of traditional healing principles and practices;*
- *Possesses a strong sense of Māori identity and incorporates cultural content and allusion in many fields of endeavour;*
- *Has a high level of respect for and affinity with kaumātua;*
- *Possesses and is accorded a high degree of mana from peers;*
- *Has a well-developed sense of altruism and is selfless in service to others.*

Bevan-Brown, 2009, page 10

Through consultation with students, parents, and local church networks within her school's Pasifika community, Faaea-Semeatu (2011) was able to propose ten "cultural identifiers" that could be used in identifying gifted and talented Pasifika students. These are:

1. Adaptability (for example, strategically adapts to New Zealand or Pasifika thinking)
2. Memory (for example, cites formal Pasifika customs and familial and village links)
3. Church affiliation (for example, uses knowledge and experience to benefit others)
4. Commitment to excellence (for example, seeks self-improvement)
5. Relationships (for example, uses talents to promote positive relationships)
6. Resilience (for example, reacts to situations with purpose and dialogue)
7. Lineage/birthright (for example, family traditions shape experiences)



8. Language fluency (for example, communicates in oral/written forms of their mother language)
9. Leadership (for example, faithful service progresses to leadership)
10. Representation (for example, successful career pathways reflect on parents).

## Profiles of giftedness

Betts and Neihart (1988) propose six profiles of gifted and talented students. These profiles can be used to raise awareness of the differences among gifted students and are especially useful in identifying older gifted and talented students whose special abilities are less likely to be shown in their schoolwork. The profiles describe sets of behaviours that can provide a starting point for discussion. However, Betts and Neihart point out the importance of remembering that “this is a theoretical concept that can provide insights for facilitating the growth of the gifted and talented, not a diagnostic classification model” (page 248). The profiles are undergoing revision (M. Neihart, personal communication, 1 June, 2011), and some of this is reflected in the following set of descriptors:

1. The **Successful** Gifted  
These students achieve highly at school and are the group most likely to be identified as gifted and talented. They are conforming, eager for the approval of others, and perfectionistic. They lack autonomy and assertiveness and avoid taking risks.
2. The **Creative** Gifted  
These students are highly creative but frustrated, bored, questioning, and sometimes rebellious. They do not conform to the school system and often challenge school rules and conventions.
3. The **Underground** Gifted  
These students deny their abilities in order to fit in. They may be insecure, shy, and quiet, avoid taking risks, and resist challenges. Many are never identified as gifted.
4. The **At-risk** Gifted  
These students are resentful and angry because they feel that the system has failed to meet their needs. They are often perceived as “rebellious loners” and can be disruptive or withdrawn. Their schoolwork is inconsistent, and their levels of achievement fall well below their ability.
5. The **Twice/Multi-exceptional** Gifted  
These students are gifted but also have a physical or sensory disability or a learning difficulty. Often their giftedness goes unrecognised because people fail to see past their disability. They can become angry and frustrated and may feel powerless.
6. The **Autonomous** Learner  
These students are confident, independent, and self-directed. They are intrinsically motivated and willing to take risks. They set goals for themselves and take responsibility for their own learning.

## Emotional and social development

Many gifted and talented students, probably the majority, give little indication that their emotional and social development is different from that of their peers. For many, their emotional and social development is the same as that of their peers. Some of them may experience considerable difficulties in these areas, but they use their exceptional ability to disguise their struggles. For other gifted students, however, these issues are far more obvious.

While researchers and educators have sometimes focused more on the learning of gifted and talented students, there has been a growing realisation that aspects of their emotional and social development also require attention. It is generally accepted that, as levels of giftedness increase, so does the need for support in the emotional and social areas. It is important to recognise that the emotional and social development of these students is not necessarily problematic but can become so if they find themselves out of step with their peers.

Observing the behaviours of gifted and talented students and identifying what these behaviours mean enables families and educators to provide the support the students need. Betts and Neihart's (1988) profiles of the gifted and talented provide a useful tool for identifying both the positive and the less acceptable behaviours that can be associated with giftedness and for developing strategies that homes and schools can use to support these students. For example, the creative gifted student who questions rules and policies can be encouraged to think in new ways while also being taught the interpersonal skills necessary to communicate their thoughts respectfully.



Looking at what gifted and talented students say about themselves is essential for identifying the issues that confront them. The value of listening to students is powerfully illustrated by the Te Kotahitanga project, which used the technique of “collaborative storying” to elicit the experiences, concerns, and questions of Māori students in mainstream New Zealand secondary schools. The differences between the students’ perceptions of their educational experiences and the perceptions of their teachers became the foundation for what is now renowned as a highly successful research and development project (Bishop, Berryman, Tiakiwai, and Richardson, 2003). The following “eight great gripes of gifted kids” published by Delisle and Galbraith (2002) align closely with the areas of vulnerability most frequently described in research:

1. *No one explains what being gifted is all about – it’s kept a big secret.*
2. *School is too easy and too boring.*
3. *Parents, teachers, and friends expect us to be perfect all the time.*
4. *Friends who really understand us are few and far between.*
5. *Kids often tease us about being smart.*
6. *We feel overwhelmed by the number of things we can do in life.*
7. *We feel different and alienated.*
8. *We worry about world problems and feel helpless to do anything about them.*

page 191<sup>6</sup>

## Potential challenges for gifted and talented students

The emotional and social development of gifted and talented students can involve three potential challenges: sensitivity, asynchronous development, and perfectionism. It is important to note that each of these can be viewed in both a positive and a negative light. How they impact on the development of the student depends a great deal on the response of teachers, parents, and whānau.

### Sensitivity

Many exceptionally gifted and creatively gifted individuals possess high levels of emotional sensitivity. Dabrowski (1972) refers to this as emotional “overexcitability”. Such individuals demonstrate a heightened awareness of the needs of others, a strong sense of right and wrong, and sensitivity to social injustices. They are often independent thinkers, non-conformist, and self-directed. In the classroom, they may have a preoccupation with social, moral, and ethical issues and often act on their convictions in these areas. They may resist tasks that they perceive as insignificant or irrelevant.

Intensely sensitive students may experience soaring highs and dark lows. During the high periods, they may experience great joy, energy, and stimulation. During the low periods, they may become shy, anxious, and fearful. They may have feelings of helplessness and despair as they contemplate the discrepancy between the real and the ideal.

<sup>6</sup> Excerpted from *When Gifted Kids Don’t Have All the Answers: How to Meet Their Social and Emotional Needs* by Jim Delisle, Ph.D., and Judy Galbraith, M.A., copyright © 2002. Used with permission of Free Spirit Publishing Inc., Minneapolis, MN: 800-735-7323; [www.freespirit.com](http://www.freespirit.com). All rights reserved.

### Asynchronous development

The intellectual, emotional, and physical development of gifted and talented students is often uneven. This asynchronous development means that their experiences are different from those of their peers, which may lead to feelings of not fitting in. These feelings can become particularly acute in early adolescence, and gifted and talented students at this stage may mask their abilities in order to gain acceptance.

Frequently, advanced intellectual development results in gifted and talented students having a much greater awareness about global issues than their peers. This may cause them to develop an intense, serious, or cynical outlook on life. However, it can also enrich student's lives and motivate them to become leaders of social change.

### Perfectionism

Perfectionism can be described as a compulsive need to achieve and be the very best. Gifted and talented students who achieve highly will naturally attract positive feedback from parents and teachers. Some students become dependent on this affirmation for their self-definition. It is not uncommon for parents, teachers, and peers to unwittingly create an environment in which the gifted student is expected to be perfect.

Perfectionists will often avoid experiences that pose a risk of failure. Perfectionism may be accompanied by intense reactions to criticism, consistent failure to complete tasks, extreme anxiety in test situations, low risk taking, nervous disorders, ulcers, and eating difficulties. This is called "disabling perfectionism".

However, perfectionism can be a positive quality that provides the impetus for achieving excellence. This is termed "enabling perfectionism".

## How gifted and talented students are perceived by themselves and by others

How gifted and talented students experience the challenges of growing up depends very much on the way they, their peers, and the adults around them perceive them.

### Self-definition

Gifted and talented students frequently place unrealistically high expectations on themselves. In some instances, this may be influenced by the unrealistically high expectations teachers, family members, or peers have of them. These students may avoid tasks in which high achievement is not guaranteed, or they may retreat to a world of fantasy.

Gifted and talented students often have strong academic self-concepts, but their social self-concepts are sometimes poor. Some gifted and talented students have mixed feelings towards their giftedness. While these students may be positive about being labelled as gifted, they may sometimes feel that their peers and teachers have negative views of them.



## Expectations and role conflicts

Gifted and talented students may feel that others' expectations of them are unrealistic. The majority of respondents in a recent New Zealand study by Ballam (2011) reported that expectations from themselves and others created pressure to perform and fear of failure, and they felt this as a major limitation. Often such expectations occur because these students display a level of maturity beyond their chronological age.

Sometimes these students also receive mixed messages from adults and peers about academic achievement and social behaviour. Some gifted and talented students may hide their giftedness in order to obtain peer acceptance. This tension between achievement and acceptance seems to be heightened for gifted and talented girls in early- to mid-adolescence and for Māori and Pasifika students.

## Starters for inquiry

### Your school's sets of characteristics of gifted and talented students

The questions proposed by Bevan-Brown are useful starters for developing and/or reflecting on your school's sets of characteristics for describing gifted and talented students (see page 25). The two questions below are particularly relevant to developing and reviewing your school's sets of characteristics.

*How is each area of giftedness perceived and demonstrated?*

*What priority is given to each area of giftedness?*

In addition, you could consider these questions:

- To what extent do the characteristics of giftedness and talent included in this section align with your school's definition?
- What changes need to be made to the sets of characteristics you use to identify gifted and talented students?
- How could the sets of characteristics your school has developed translate into your approaches for identifying gifted and talented students?

### Reflective tool for recognising giftedness in Māori students

As part of their research, Mahaki and Mahaki (2007) described the characteristics associated with each of their indicators of Māori giftedness. A reflective tool has been developed that gives the indicators and associated characteristics. It includes the following key questions in relationship to each indicator:

- Where would we see this in our school/community?
- How could we nurture this in our school/community?
- What do we need to know/find out?

This reflective tool is provided in Appendix 3 (pages 109–115). You can use this tool for reflecting on recognising giftedness in Māori students in your school and community. However, this particular set of characteristics was developed for use in one school. You will need to adapt the template in consultation with parents, whānau, local iwi, and other members of the local Māori community, making any necessary changes to the characteristics as you do so.



## Readings and resources

### Exploring the components of a Māori concept of giftedness

The table in Appendix 4 (pages 116–117) provides a tool for exploring the eight components of a Māori concept of giftedness (proposed by Bevan-Brown, 1996) and for considering the implications of these components for schools. This table was developed by Angus Macfarlane.

### Ruia: School-whānau partnerships for Māori learners' success/Ngā hononga kura-whānau e puta ai ngā ihu o ngā ākonga Māori

Ruia is an online Ministry resource developed at the same time as this resource. Its purpose is to support schools to develop and sustain productive partnerships with Māori parents, whānau, and communities. These partnerships are necessary if schools are to take a bicultural approach to the development of provisions for gifted and talented Māori students. It is available at <http://partnerships.ruia.educationallleaders.govt.nz>

### Summary: Characteristics of gifted and talented students

- As definitions of giftedness have broadened, so too has the diversity of the characteristics included in each concept. Each gifted and talented student is unique, with his or her own set of behaviours and characteristics.
- It is important for schools to consult with their community, including students, parents, whānau, community leaders, and church groups, to gain an understanding of the behaviours and characteristics that are valued by different cultural groups. It is also imperative that schools develop a set of characteristics that reflects their school community's definition of, and approach to, giftedness and talent.
- While most characteristics of the gifted and talented are positive, some characteristics typical of the gifted and talented can be more challenging. Understanding this can help in identifying these students and providing support.
- The emotional and social development of most gifted and talented students is similar to that of their peers. However, for some, emotional and social difficulties arise as they progress through life. It is important to recognise that the emotional and social development of these students is not necessarily problematic, but can become so if they find themselves out of step with their peers.



## Component 3: Identification of gifted and talented students

Identifying gifted and talented students is a high priority and a means to developing and implementing appropriate educational programmes. The identification process involves the criteria highlighted in a school's concept and characteristics of giftedness. In a way, identification is the link between definition and programmes. Concept, characteristics, identification, and programmes should always align.

As with the other components, a co-ordinated and school-wide approach is essential. The principles and practices of identification can then be consistent across the school. Since giftedness and talent develop over time and in different contexts, the identification process needs to be ongoing.

Students also need to experience consistency as they transition through the levels of schooling. This requires communication between schools about their methods of identifying and providing for their gifted and talented students.

### Principles for identification

The principles of identification (listed below) are aligned with the Vision and Core principles for providing for gifted and talented students (see page 10). They are very similar to principles of formative assessment in that the purpose of identifying gifted and talented students is to improve teaching and learning.

The principles are:

- Base identification on a school-wide, clearly defined, multi-categorical, bicultural, and multicultural concept of giftedness and talent.
- Begin identification early (that is, during early childhood or at least during the junior classes at primary school).
- Ensure open communication about identification processes between parents/caregivers, whānau, students, teachers, the principal, and the Board of Trustees.
- Ensure that identification is an ongoing process. Students' interests and abilities are constantly changing, so teachers need to be alert to emerging abilities and talents. A responsive learning environment that offers challenging experiences is a catalyst for the identification of new abilities.
- Look for potential as well as demonstrated performance.
- Use a team approach in which a number of teachers and school leaders co-ordinate the identification programme on a school-wide basis. The team should also include input from others with an interest and concern in the child's development, such as parents, whānau, and iwi.
- Use a culturally responsive approach, ensuring that the diversity of the students identified as gifted and talented matches the diversity of the school population.

- Ensure that your approach includes a focus on the hidden gifted and under-served groups. These can include minority ethnic groups; those for whom English is a second language; under-achievers; those with learning, sensory, and physical disabilities; and those from lower socio-economic groups. Attention should also be given to gender differences.
- Ensure that information for identification is from a multi-method approach and is based on observation in a range of authentic settings and through talking with students, rather than just on formal assessment tasks.
- Ensure that identification methods are responsive to the many potential areas of giftedness and talent.
- Provide staff with any professional development they need to create and implement the identification processes.

## Methods of identification

A multi-method approach to identification means that schools can be responsive to the strengths and needs of all gifted and talented students, including those whose cultural background differs from the majority culture of the school.

An approach that employs a number of different methods of identification gives insights into many different contexts, recognising that gifts and talents that may not be apparent in the classroom may be more visible on the sports field, at church, on the marae, or at home. It incorporates a continuum of methods, from the formal (including the collection and systematic analysis of a range of school-wide data) to the informal, such as learning conversations with students, parents, whānau, and other community members.

Many of the methods of identification described below can be used for all students. The information simply needs to be collated so that it allows gifted and talented students to be identified and their needs to be addressed as early as possible. Some schools develop registers or databases for collating this information about their gifted and talented students.

### Teacher nomination

Nomination by the teacher is one of the most commonly used methods of identification. When teachers know about and are actively involved in developing the school's approach to providing for gifted and talented students, identification of gifted and talented students improves. Teachers will support their judgments with the help of tools such as checklists, teacher observation scales, and student portfolios. (For examples of such tools, see the TKI website at <http://gifted.tki.org.nz>). This is in line with the Ministry of Education's advice on how to make an overall judgment of student achievement and progress in relation to the National Standards. Teachers are expected to gather evidence in relation to the National Standards by:

- observing the process a student uses (for gifted students, this is best done with the use of an observation scale specifically designed for identifying gifted students – because they are based on the characteristics of giftedness)
- talking with the student and their parents and whānau to find out what the student knows, understands, and can do
- gathering results from formal assessments, including those provided through standardised tools.

A student who is identified as being well above the standard in mathematics, reading, or writing may be judged to be gifted or talented in those areas of the curriculum.

In making effective observations, teachers will focus on a student's strengths across many contexts and domains, ensuring that they use lists of culturally appropriate characteristics and behaviours as described in the previous section (pages 35–37). A student's rate of progress can also be an indicator of potential talent.

### Rating scales

Rating scales can help teachers to identify gifted and talented students by focusing on typical behavioural characteristics. Without rating scales, some of these characteristics could be overlooked. In selecting or devising a rating scale, teachers should check whether it includes culturally appropriate characteristics. When applying the scales effectively, teachers also analyse the impact of their own cultural perspectives. As Bevan-Brown (2009) points out, for example, humour is often influenced by cultural beliefs and understandings.

The Teacher Observation Scales for Identifying Children with Special Abilities (McAlpine and Reid, 1996) were developed with the assistance of classroom teachers throughout New Zealand. The scales are designed for middle primary, intermediate, and junior secondary school levels. The accompanying Teachers' Handbook contains information on the kinds of students the scales were designed to identify, when the scales should be used, the content of the scales, information on scoring, and technical aspects of reliability and validity. The five scales relate to the characteristics of giftedness outlined in the previous section on pages 33–35:

- learning characteristics
- social leadership characteristics
- creative thinking characteristics
- self-determination characteristics
- motivational characteristics.

Other rating scales that are based on both New Zealand and international research include:

- a behavioural rating scale developed by Barbara Allan (2002) for identifying young gifted children
- Jill Brandon's (2000) observation profile and rating scale for identifying students who have special abilities in the visual arts.

Several ratings scales are available on the TKI website (<http://gifted.tki.org.nz>).



### Assessment tools

The Assessment Tool Selector (<http://toolselector.tki.org.nz>) gives teachers access to a range of formal assessment tools, many of which can aid in the identification of gifted and talented students. It provides descriptive information that teachers can use to select the tool most appropriate to their purpose.

Many of the tools covered by the Assessment Tool Selector are standardised tests. Standardised tests have a fixed set of test items, specific directions for administration and scoring, and norms based on a representative sample. The norms may allow for the comparison of an individual's test score with those of other specific norm groups, such as the gifted and talented.

Standardised tests are commonly used for identifying the gifted and talented. For example, the New Zealand Council for Educational Research (NZCER) series of Progressive Achievement Tests in reading, mathematics, and listening comprehension can be useful as part of a multi-method identification process.

As instruments for identifying gifted and talented students, standardised tests have both advantages and disadvantages. Some of the advantages are high reliability, relatively high validity, and their provision of national norms. Being group tests, these instruments are also relatively inexpensive. However, most standardised achievement tests do not have sufficient items at the higher end of the scale to challenge gifted and talented students. They also emphasise convergent rather than divergent thinking. The validity of some standardised tests, such as the Torrance Tests of Creative Thinking, has been called into question. Others have a cultural, linguistic, and/or gender bias. Some standardised tests are inappropriate for students who have reading and language difficulties.

If a student has reached the ceiling with a standardised test such as asTTLe, teachers should re-test them at a higher level to get a clearer picture of the student's strengths and gaps, and the next steps for learning. This is called "above-level" or "out-of-level" testing.

### Teacher-made tests

Some teachers are qualified to design tests of their own. Some of these tests can be targeted towards students with special abilities in specific curriculum areas. The tests may contain a high percentage of items that assess students' ability to analyse, evaluate, and create in a range of contexts, as well as some items that are open-ended and look for divergent thinking. Some teachers also develop local norms.

In a culturally responsive context, teachers could incorporate traditional Māori approaches to identifying giftedness. One such approach is described by Bevan-Brown (2009):

*... tohunga (experts) often required youngsters to prove themselves before they were entrusted with valued knowledge and skills. This involved giving the person snippets of information to see what they would do with it. If their consequent actions showed they had the interest, ability, motivation and respect deemed necessary, then they were tutored and nurtured in the area concerned.*

page 14



## Portfolios

Student portfolios are a useful form of assessment and can be helpful in identifying gifted and talented students. Portfolios can show examples of best performance or best product and can show systematic evidence of student achievement over time. They also allow for a rich variety of student choice in terms of content and preferred ways of learning, as well as encourage higher levels of thinking and reflective practice. Information technology provides innovative ways to record and store portfolios.

Teachers may not always have the cultural knowledge to fully understand the motivation and purpose behind students' products and performances. In a culturally responsive learning environment, this can be overcome by ensuring students feel comfortable and are given the opportunity to discuss these elements with their teacher.

## Parent and whānau nomination

Parents, caregivers, and whānau have a wealth of knowledge about their children that can be useful in the identification process. While most of this knowledge is based on experiences outside the classroom, insights into the child's motivation, interests, attitudes, and special abilities will be relevant to the teaching programme.

Some schools have information-gathering forms that contain questions related to advanced development, such as early reading, advanced language skills, advanced reasoning ability, and intellectual curiosity (which can all be indicators of giftedness).

Parental judgments are particularly important when a student's cultural identity (including their heritage, culture, language, and religious beliefs) does not match the majority culture of the school. However, culture can be a barrier to nomination for many Māori parents who do not wish to appear to be whakahīhī (boastful). The feelings of these parents can be respected and allowed for by:

- developing a genuinely trusting, reciprocal relationship between home and school
- including whānau members, kaumātua, and other Māori in the local community in the process of identifying Māori students with special abilities.

While students may not nominate themselves and parents may be reluctant to nominate their own children, it may be appropriate for other whānau members or kaumātua to make nominations. Again, such conversations should take part in the context of an ongoing relationship that values the knowledge of all participants.

Māori and Pasifika parents may be more likely to respond to approaches that are less direct than explicit parent nomination. For example, Bevan-Brown (2009) suggests conducting informal conversations about students' passions and/or asking parents and whānau to complete student profile sheets, which can then form the basis of discussions on how to best support the student's learning at home and at school.

While many parents and whānau have a realistic understanding of their child's performance compared with that of others of the same age, others do not. Lack of understanding about giftedness can lead to both under- and overestimations of a student's ability.

## Self-nomination

Self-nomination is a useful form of identification for some educational programmes. It is valid for identifying areas of unique special ability and interest, such as computers, poetry, musical ability, and social and ethical concerns. Self-nominations have been found to be useful at the secondary school level. This approach can also give valuable insights into student self-concepts, self-esteem, attitudes, and values.

Self-nominations can be facilitated through teacher–student interviews or through interest inventories and questionnaires, which can list a wide range of special interests. Self-nominations can, however, be subject to bias in that some students lack a realistic appraisal of their own abilities. Some students (particularly those from Māori and Pasifika cultures) may be reluctant to put their name forward despite having exceptional abilities. This type of reticence can be understood, respected, and incorporated within a culturally responsive environment in which students feel comfortable about sharing their interests and aspirations. These students may find it easier to nominate areas of success in which they have achieved as part of a group.

## Peer nomination

Peer nomination can be effective for identifying students who show special abilities both inside and outside the classroom (for example, sporting abilities, musical abilities, social leadership, community service, business acumen, or computing skills).

Teachers can assist students to use peer nomination by suggesting relevant attributes and behaviours that match some dimensions of giftedness and talent. For example, in the area of creativity, teachers may develop peer nomination forms with such questions as “Who, in your class, comes up with really clever and original ideas?” Hypothetical questions such as “If the class was stranded on a desert island, who would be likely to come up with some great ideas to make life enjoyable?” can also be used. Teachers should encourage students to focus on specific traits related to giftedness rather than simply nominate their best friends.

Peer nomination can be used in conjunction with self-nomination and teacher nomination. Some teacher rating scales suggest that peer nomination be used in tandem with the teacher rating scale. Peer nominations can be made on the basis of questions that are related to those on the teacher rating scale. The peer nominations can then be compared with the results from using the teacher rating scales. If self-nomination is also used, the resulting triangulation can increase the reliability of the results.

Effective peer nomination forms consider key areas of behaviour that closely relate to the concept of giftedness and talent, including behaviours and values that are relevant to different cultural and ethnic groups. Peer nominations can be helpful in identifying students with special abilities from minority cultural groups and students with disabilities.

## Educational psychologist nomination

Individual tests, such as the Stanford–Binet Intelligence Scale and the Wechsler Intelligence Scale for Children (WISC), are administered by qualified psychologists. Subjects reply orally to most questions. The WISC yields a verbal IQ, a performance IQ, and a full-scale IQ derived from all the subtest scores. Students scoring in the upper ranges (130+) are usually

considered gifted. An educational psychologist with experience in working with gifted students can also provide a detailed student profile, including recommendations for appropriate intervention.

Tests of intelligence can also be classified as verbal or non-verbal. The Standard Progressive Matrices (with New Zealand norms) is an example of a non-verbal test. It can be useful for students from diverse cultural and ethnic groups and for students for whom English is a second language. Likewise, the Naglieri Nonverbal Ability Test has been designed to be relatively free of cultural bias. It is an easily administered online test that measures students' non-verbal reasoning and general problem-solving ability.

While teachers and school leaders are not expected to be able to administer all of these tests, they need to be able to interpret their results – parents, whānau, and out-of-school providers may ask for these assessments. The most useful information is not the total score, but the details about a student's relative strengths and weaknesses and how they process information.

When considering intelligence testing, it is important to consult an educational psychologist who understands giftedness.

## Under-served groups and identification

### Students from diverse cultures

As discussed on pages 12–14, narrow methods of identification have often led to gifted and talented Māori and Pasifika students being overlooked. The culturally responsive learning environment is a sound basis for identifying gifted and talented students of diverse cultural backgrounds. Within this approach, rich, stimulating, and culturally relevant experiences support all students to develop their gifts and talents – and help teachers to recognise them.





## Twice or multi-exceptional students

In their profiles of the gifted and talented, Betts and Neihart (1988) describe twice or multi-exceptional students. These are students whose special abilities are masked by learning, behavioural, or physical disabilities. Some may be especially gifted in one aspect of learning but not in others.

Traditional methods of identification have not picked up gifted students with learning disabilities, such as dyslexia. These students typically score “average” in standardised achievement tests and are not identified. However, average scores often mask peaks and troughs in performance (that is, both special abilities and disabilities). Significant discrepancies across test categories often indicate a learning disability (scores from oral responses are typically much higher than scores from written responses).

Teachers can also identify gifted students who have learning disabilities by examining students’ behavioural profiles. A typical profile of a gifted student with learning disabilities may include considerable variability in performance across tasks, difficulty with visual and/or auditory processing, short attention span, impaired memory, low self-concept and self-esteem, poor writing and organisational skills, and yet exceptional interests, abilities, and knowledge in specific areas, sometimes linked with special abilities in creative and abstract thinking.

Recognising and nurturing the gifts and talents of these students is a challenge that is likely to require the involvement of specialist teachers. Such students often have a negative self-concept and may need support to recognise and value their areas of strength. Students with learning disabilities who have been identified as gifted have responded positively to a responsive learning environment approach. As a result of such programmes, student motivation, commitment, performance, and self-concept have been shown to improve.

There is evidence that some gifted students may also have behavioural difficulties such as Attention Deficit Hyperactivity Disorder (ADHD). Other students may have exceptional gifts and talents and also be identified as having an Autism Spectrum Disorder (ASD).

Some gifted and talented students have physical and sensory disabilities. These students are among the “hidden gifted” because their special abilities are sometimes masked by their more visible physical and sensory disabilities.

Working with students who are exceptional in more than one way requires co-operation between classroom teachers and specialist teachers, as well as engagement by parents and whānau in developing individual educational plans. It is important that a gifted student’s strengths are recognised as soon as possible and that opportunities are provided for their development alongside remediation for any difficulties.

Teacher observation and rating scales have been used to help identify students who have disabilities but may also have special abilities. Some of the most effective methods of identification have been parent, peer, and self-nominations. However, caution is necessary. While the observations of others are invaluable, whether a child has a disability and what that disability may be needs to be assessed by a suitably qualified specialist.

## Underachieving students

There is evidence that underachievement is a serious issue for many gifted and talented students (Moltzen, 2004). In some instances, these students are very skilful at masking their true ability and may achieve to a level that is not likely to cause concern on the part of teachers. While it may be relatively easy to obtain information on a student's performance at school, finding an indicator of his or her true ability can be much more difficult. A responsive and student-centred learning environment, in which there are varied opportunities to achieve and it is "safe" to achieve, makes it more likely that this true ability will be demonstrated.

Teachers need to be aware of the characteristics associated with underachievement in gifted and talented students. A key indicator can be evidence of a significant discrepancy in performance across areas that require similar knowledge or skills. Checklists and teacher observation scales are helpful in increasing the validity and reliability of teacher observation.

Parents, whānau, and peers can also help to identify the potential of this group of students. Evidence of high achievement outside school (for example, at church or in a cultural or sporting group) can offer teachers an insight into a student's real ability.

## Students from economically disadvantaged backgrounds

Gifted and talented students from economically disadvantaged backgrounds can be difficult to identify and are consistently under-represented in programmes for the gifted and talented. Since the performance of these students generally declines the longer they are at school (by comparison with students from more advantaged backgrounds), it is critically important to identify them as early as possible. Attention should focus on early childhood education and on junior school.

Traditional identification methods, such as teacher nomination, tend to be ineffective with this group of students. One of the reasons for this is an enduring stereotype that tends to exclude these students. The accuracy of teacher identification can be increased with the use of checklists designed specifically for identifying disadvantaged gifted students. Peer nominations have proved promising, particularly where peers have identified areas of special ability outside the classroom, such as art, music, sport, and leadership.

The responsive learning environment approach has been particularly valuable for this group of students. When coupled with early identification and intervention, it is usually the most effective method.



## Starters for inquiry

### Reviewing your school's plan for identification

Ask how well your school's plan for identification matches your school's concept of gifted and talented as stated in your definition. For example, if your school's definition includes interpersonal skills such as the ability to relate well to others, what are its processes for identifying students with this skill?

Schools also need to ask:

*What are culturally appropriate and effective ways of identifying gifted students?*

Bevan-Brown, 2009, page 6

It is important to think about the specific cultural groups in your school community and ask, for example:

"How well do our identification processes take into account Māori concepts of group giftedness, including the acknowledgment that an individual's special expertise may only be realised when working in a group?"

Appendix 4 (pages 116–117) is a tool that schools can use to help consider the implications of Māori concepts of giftedness for the ways they identify gifted and talented students.

### Developing checklists

This handbook recommends that schools develop sets of characteristics of giftedness and talent that are aligned to their definitions. Schools can then use those sets to create templates that teachers can use to identify students who meet their school's definition. There are several examples of such templates on TKI. They include rating scales, class summary sheets, and examples of forms that can be used for parent and student nomination.

## Readings and resources

Among its services, the New Zealand Association of Gifted Children (NZAGC) has a list of educational psychologists, many of whom have a special interest in and are experienced in working with gifted children. The list can be found on their website at: [www.giftedchildren.org.nz/](http://www.giftedchildren.org.nz/)

*Identification of Gifted Māori Students* (Bevan-Brown and Niederer, 2012) is a useful table exploring different approaches to identifying gifted Māori learners. It is available from the gifted and talented community on TKI at [www.gifted.tki.org.nz](http://www.gifted.tki.org.nz)

The gifted and talented community on TKI has additional information about twice or multi-exceptional students.

### Summary: Identification of gifted and talented students

- Identification should be based on schools' definitions of giftedness and talent and enable the development and implementation of appropriate educational programmes.
- A sound identification process should begin early, be continuous, incorporate a team approach, be as unobtrusive as possible, and take an inclusive approach that will benefit as diverse a range of students as possible.
- Identification should employ a wide range of quantitative and qualitative methods, with the data drawn together to enable overall judgments to be made about students' current performance and potential to improve.
- Special attention should be given to the "hidden gifted", including students from minority cultural and ethnic groups, those for whom English is a second language, underachievers, twice or multi-exceptional students, and students from lower socio-economic groups.
- Identification should include the perspectives of the students themselves, their parents and whānau, and others with an interest in the students' development.



## Component 4: Differentiated programmes for gifted and talented students

Students who have been identified as gifted and talented require differentiated programmes to meet their needs. The options are many, but the crucial factor in developing and implementing such programmes is that they must be appropriate for the specific needs of the students.

Using identification as a means to achieve this end will help to ensure that the differentiated programme is appropriate.

Schools define and identify giftedness to uncover individual abilities, qualities, and interests; differentiation aims to develop these further. Put at its simplest, the purpose of gifted education is to enable gifted and talented students to discover and follow their passions – to open doors for them, remove ceilings, and raise expectations by providing an educational experience that strives towards excellence.

The principles and values laid down in *The New Zealand Curriculum* call on schools to create curriculums that put students firmly at the centre of teaching and learning. Schools are to create high expectations and promote excellence, innovation, inquiry, and curiosity. They are to foster five key competencies – a set of integrated qualities and abilities that clearly align with a multi-categorical concept of giftedness and talent. Teachers are expected to inquire into the impact of their teaching and use the evidence from this inquiry to make changes that will better meet the learning needs of their students. The principle of inclusion, as described in *The New Zealand Curriculum*, aims to ensure that all students experience school as a place of learning:

*Inclusion: The curriculum is non-sexist, non-racist, and non-discriminatory; it ensures that students' identities, languages, abilities, and talents are recognised and affirmed and that their learning needs are addressed.*

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The principle of inclusion means that each student is given opportunities to participate in all areas of an inclusive curriculum. Ensuring each student has these learning opportunities requires a differentiated programme within the classroom and beyond. Differentiation means being responsive to students' individual strengths and needs as they are identified through careful and ongoing assessment. Teachers who differentiate begin by recognising the uniqueness of each student – their interests, expectations, motivations, abilities, resources, skills, culture, home and family, way and rate of learning, and so on. When teachers provide their students with choices, group them flexibly, enrich the curriculum with guest speakers or field trips, work with specialist teachers, or make modifications for the language, skills, or knowledge of different students, they are differentiating. Differentiation is an approach to teaching and learning that focuses on the learning skills and potential of the individual student. As such, it is appropriate for *all* students in the classroom.

When applied to gifted and talented students, differentiation requires teachers to acknowledge these students' varied learning, social, and emotional needs by providing qualitatively different learning opportunities – doing different kinds of things, not simply more of the same things. It means creating a responsive classroom environment in which adaptations are made to the pace, depth, and breadth of learning in relation to its:

- content (what is taught or learned) – the concepts, information, ideas, and facts within the curriculum
- process (how the content is taught or learned) – how new material is presented, what activities students are involved in, and what teaching methods are used
- product (how learning is evidenced by gifted and talented students) – the tangible or intangible results of learning; “real” solutions to “real” problems.

When each of these elements is differentiated, the learning environment is also transformed.

## Models of differentiation

There are a number of different models for conceptualising differentiation.

Riley (2004) has developed a set of principles (see table 3) for teachers and school leaders to work to when developing differentiated content, processes, and products for gifted and talented students.



Table 3. Principles of differentiation

Content should be:	Processes should be:	Products should be:
<ul style="list-style-type: none"> <li>• Abstract, centred around broad-based themes, issues, and problems</li> <li>• Integrated, making multidisciplinary connections</li> <li>• In-depth and with breadth</li> <li>• Self-selected, based upon student interests and strengths</li> <li>• Planned, comprehensive, related, and mutually reinforcing</li> <li>• Culturally inclusive, appropriate, and relevant</li> <li>• Advanced in both complexity and sophistication</li> <li>• Gender-balanced and inclusive</li> <li>• Enriched with variety, novelty, and diversity</li> <li>• Embedded within methods of inquiry, emulating the work of professionals</li> <li>• Inclusive of moral, ethical, and personal dimensions</li> <li>• Explored through the study of the lives of gifted people.</li> </ul>	<ul style="list-style-type: none"> <li>• Independent and self-directed, yet balanced with recognition of the value of group dynamics</li> <li>• Inclusive of a service component or opportunity to share outcomes for the good of others, like the community or family</li> <li>• Stimulating higher levels of thinking (analysis, synthesis, and evaluation)</li> <li>• Creative, with the chance to problem find and problem solve</li> <li>• Accelerated in both pace and exposure</li> <li>• An integration of basic skills and higher level skills</li> <li>• Open-ended, using discovery or problem-based learning strategies</li> <li>• Real – mirroring the roles, skills, and expertise of practitioners</li> <li>• Designed to develop research skills; time management, organisational, and planning abilities; decision-making processes; and personal goal setting</li> <li>• Metacognitive, allowing students to reflect upon their own ways of thinking and learning.</li> </ul>	<ul style="list-style-type: none"> <li>• Created with the aim of developing self-understanding, specifically in relation to giftedness</li> <li>• Facilitated by mentors, as well as teachers</li> <li>• The result of real problems, challenging existing ideas and creating new ones</li> <li>• Developed using new and real techniques, materials, and ideas</li> <li>• Evaluated appropriately and with specific criteria, including self-evaluation</li> <li>• Self-selected</li> <li>• Wide in variety</li> <li>• Designed for an appropriate audience</li> <li>• Transformations of ideas, shifting students from the role of consumers to producers of knowledge.</li> </ul>



## Formula for planning a differentiated programme

Heacox [2002, page 72] offered a simple planning formula to help teachers create differentiated learning opportunities:

### **Content + Process + Product = Learning Experience**

Teachers can use this formula to make adjustments to the three key elements in small but significant ways.

## A culturally responsive approach

The culturally responsive approach evolved from the responsive learning environment approach. In this approach, the teacher sets up challenging learning experiences within a responsive learning environment. These experiences provide opportunities for students with special abilities to develop and display these abilities. The approach offers opportunities for higher level thinking, creative thinking, and original student research. A responsive learning environment helps to nurture and develop the abilities of gifted and talented students and to ensure that their diverse areas of ability are recognised.

Barbara Clark (1988), in her Integrative Education Model, gives the following characteristics of a responsive learning environment:

1. *There is an open, respectful, and co-operative relationship among teachers, students, and parents, a relationship that includes planning, implementing, and evaluating the learning experience.*
2. *The environment is much like a laboratory or workshop: rich in materials [and] with simultaneous access to many learning activities. The emphasis is on experimentation and involvement.*
3. *The curriculum is flexible and integrative. The needs and interests of the students provide the base from which the curriculum develops.*
4. *There is a minimum of total group lessons, with most instruction occurring in small groups or between individuals. Groups centred around needs or interests can be formed by teachers or students.*
5. *The student is an active participant in the learning process. Movement, decision-making, self-directed learning, invention, and inquiry are encouraged both inside and outside the classroom. Students may work alone, with a partner, or in groups. Peer teaching is important.*
6. *Assessment, contracting, and evaluation are all used as tools to aid in the growth of the student. Frequent conferences keep student, teacher, and parents informed of progress and provide guidance for future planning.*
7. *Cognitive, affective, physical, and intuitive activities are all valued parts of the classroom experience.*
8. *The atmosphere is one of trust, acceptance, and respect.*

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An important descriptor that is missing from Clark's list and is a requirement in New Zealand schools is cultural responsiveness. Bevan-Brown explains that a culturally responsive environment approach involves teachers, programmes, and teaching and assessment that support cultural diversity. (See below for further details.)

## Differentiation within a culturally responsive learning environment

In a responsive learning environment, gifted and talented students, their peers, and their teachers work together as a community of learners with a shared responsibility for differentiation.

Responsive learning environments are physically, socially, emotionally, and culturally responsive to the identities of learners – for example, a classroom may have “people spaces” or areas that are inviting, comfortable, rich in resources, and capable of flexible use. More importantly, responsive classrooms are warm, accepting, respectful havens in which students are free to be themselves, to trust one another, and to accept individual differences.

Bevan-Brown (2005) explains that four of the “ingredients” of a “culturally responsive environment” are:

1. *Teachers who value and support cultural diversity in general and Māori culture in particular ...*
2. *Programmes that incorporate cultural content, including cultural knowledge, skills, practices, experiences, customs, and traditions ... [making this] part and parcel of the general classroom programme ...*
3. *Programmes that incorporate cultural values, beliefs, attitudes, behaviours, and dispositions ...*
4. *Teaching and assessment that utilises culturally preferred ways of learning ...*

Bevan-Brown, 2005, pages 153–154

The first of Bevan-Brown's ingredients requires teachers to look within themselves and consider:

- their attitudes to Māori culture and Māori students
- their level of knowledge, not just of Māori culture, but of its implications for providing for gifted Māori students.

The other ingredients involve making adaptations to the content, process, and product of learning. Table 4 shows examples of how teachers might differentiate content, processes, and products based on some Māori abilities and qualities (adapted from Bevan-Brown, 2005).

Table 4. Examples of cultural responsiveness

Area of differentiation	Example of cultural responsiveness
<b>Content</b>	Mere is a student who is gifted in Māori performing arts. Her teacher placed her in charge of a school production, keeping a watchful eye, but providing her with the freedom to create the whole show. Mere wrote the script and waiata, made up the actions, taught them to her peers, and organised the practices. When the show was performed for whānau, it “blew them away”!
<b>Process</b>	The mentor approach is particularly appropriate for nurturing giftedness in Māori students because it is a traditional practice. A teacher at a kura kaupapa Māori explained that at her kura, when a particular talent is identified, they select somebody from within the whānau to help nurture that talent. This may happen within or outside the kura and during or outside school time. “It really doesn’t matter. It depends on what is most appropriate and what opportunities arise.”
<b>Product</b>	“Being of service” is an integral component of giftedness for many Māori. One teacher worked with a group of students who were gifted in te reo Māori. The students analysed published stories for young children in order to understand the components of a successful story, researched topics of interest to children by spending time at a kōhanga reo, and then wrote and illustrated their own children’s books. They then returned to the kōhanga reo to read their stories to the children and donate the books to the library.

Bevan-Brown’s (2005) list of ingredients and accompanying examples draw on her extensive research into what is required to create a learning environment that will foster the skills, abilities, and qualities of gifted Māori students. However, she believes that a culturally responsive environment is beneficial to students of all minority ethnic groups – and she issues a challenge for teachers to prove it.

## Enrichment and acceleration

In any discussion about gifted education programmes, the two most commonly used terms are likely to be enrichment and acceleration. These two approaches are not mutually exclusive but complementary and, in an ideal programme, are integrated. When implemented independently, each approach has advantages and disadvantages. Blending the two can achieve a balance of good practice in the education of gifted and talented students.

Enrichment refers to the provision of learning opportunities that give depth and breadth to the curriculum in line with students’ interests, abilities, qualities, and needs. Enrichment activities normally offer challenges that are additional to those in the curriculum. Enrichment is appropriate for all students and, when well planned, can be implemented in a way that also addresses the “repertoire of interests and breadth of skills and strengths” (Victoria Department of Education, 1996, page 33) of gifted and talented students. Enrichment also allows for varied grouping with peers who are similar in ability, interests, or age.

Moltzen (2000) explains that enrichment is a provision that is easy for New Zealand teachers to defend philosophically and pedagogically. However, care must be given to ensure that enrichment opportunities are coherent, comprehensive, relevant, meaningful, and carefully designed to meet the learning needs of individual students. While there is research demonstrating the effectiveness of some models of enrichment, the overall effect on students' learning – described by Hattie (2009) as “just below the hinge” – is significantly lower than that of acceleration.

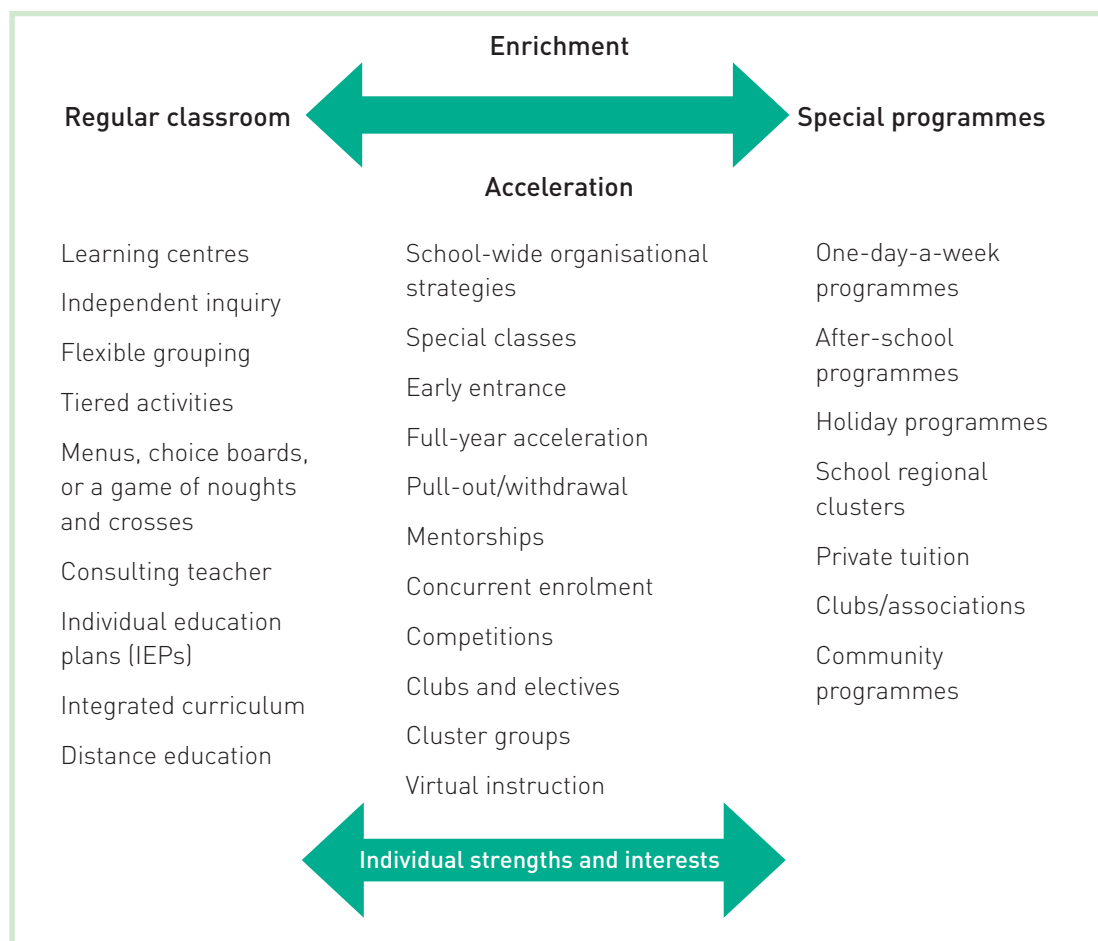
As Colangelo and his colleagues (Colangelo, Assouline, and Gross, 2004) explain, acceleration eliminates boredom by challenging students and giving them the chance to “learn that striving to improve is a wonderful part of learning” (page 17). Despite popular myths and misconceptions, students who are accelerated do not suffer harmful social and emotional effects, nor do they demonstrate any gaps in knowledge or skills in their learning. In fact, Hattie's (2009) synthesis of over 800 meta-analyses identified acceleration as the fifth highest contributor to student achievement. It can be argued that, of all the interventions for gifted and talented students, acceleration is best supported by research. Most of the evidence from research contradicts parents' and teachers' concerns about the social and emotional effects of acceleration (Moltzen, 2000; Vialle, Ashton, Carlon, and Rankin, 2001). Recent New Zealand research conducted by Janna Wardman (2010) found that although secondary students who had been accelerated for a full year encountered some short-term challenges in social and emotional adjustment, the long-term outcomes were largely beneficial. When acceleration is carefully designed and monitored, it enhances learning for gifted students and “raises their motivation and enjoyment of school and life in general” (Townsend, 2004, page 296).

When planning and implementing differentiated programmes for gifted and talented students, schools need to draw on both approaches and merge enrichment and acceleration so that students are offered both a pace of learning that is appropriate to their needs and opportunities for depth and breadth. It is also important to remember that all opportunities for gifted students – both enriched and accelerated – must be *qualitatively* differentiated. Schools will probably discover that no single option is sufficient on its own to serve the range of abilities and interests of its gifted and talented students. A continuum of provision is needed.



## Provisions for the gifted and talented

A continuum of opportunities for gifted and talented students begins in the regular classroom. From there, it is expanded to include other options that are suited to individual student needs. Figure 4, discussed below, illustrates this further.



*Figure 4. Qualitative differentiation: A continuum of provisions for gifted and talented students*

### The regular classroom programme

Gifted and talented students spend most of their school education in regular classrooms that can be tailored to fit individual needs by careful planning and instruction, flexibility, and resourcefulness. New Zealand classrooms are particularly suited for gifted and talented students when teachers make conscious decisions to implement *The New Zealand Curriculum* as intended – by assessing the learning needs and strengths of students and adapting instruction to individual levels.

Not surprisingly, New Zealand research shows a preference for meeting the needs of gifted students of all ages within the context of the regular classroom, particularly through using ability grouping and independent or small group inquiries (Riley et al., 2004). However, the possibilities are certainly not limited to these two options. Some of the strategies in figure 4 for providing differentiated learning experiences that enrich and accelerate learning for gifted and talented students are described more fully below.



### Independent inquiry

Individuals or small groups of students may investigate topics that are related to the curriculum and to their personal interests and strengths. Ideally, this type of study is student selected and directed. However, teachers may begin by giving students choices to select from, gradually scaffolding them towards independence.

Teachers guide students through the process of selecting topics, planning, goal setting, and presenting their discoveries. Teachers facilitate this independent study by:

- helping the students with their time management
- timetabling
- ensuring that resources are available
- providing checkpoints
- teaching skills related to research and product development
- assessment.

Riley (2011) recommends learning contracts as a good way of managing self-directed learning, whether it is conducted through independent inquiry or through the construction of a learning centre (see below). Learning contracts are collaboratively constructed by teachers and students and clearly outline the intended learning outcomes and how they will be achieved. The contract specifies the content, processes, and products and sets a timeline.

### Learning centres

Learning centres that provide a range of activities based on high-interest topics can be designed to both challenge and stimulate gifted and talented students (Winebrenner, 2001). By creating a range of activities suitable for many ability levels and learning styles, these centres offer students the freedom and independence to make choices about their learning. A learning centre may be a library corner, science table, file folder, or colourful box that contains activity cards, books, tapes, magazines, equipment, or videos. It is important that these centres focus on important learning goals, provide instructions for students, have a system of monitoring for completion and quality, and include means of assessment.

Some schools may share these centres across classrooms or locate them centrally in a school resource room or library.

### Flexible grouping

Students may be grouped within the classroom and across the school day according to abilities, interests, and the purposes of learning. The nature of the groups will vary (for example, ability groups, co-operative learning groups, interest groups, student-led or teacher-led groups, and student dyads), as will the means by which the groups are selected (for example, by teachers, by students, or at random). Heacox (2002) contends that the hallmarks of flexible grouping are responsiveness and fluidity, with different activities for different students.

Teachers plan ability groups on the basis of assessed skills and knowledge. Although this practice is common, particularly in many primary classrooms, teachers need to keep in mind that some students may be beyond the top group and require off-level assessment for adequate placement. Interest groups may arise more spontaneously and be directed by student curiosity rather than by assessment.

Co-operative learning groups that have the purpose of academic growth work best for gifted and talented students when they are grouped homogeneously with like-minded peers, rather than heterogeneously (Robinson, 2003). Like all learners, gifted students need opportunities for learning and support. Teachers should avoid making the assumption that the role of gifted and talented students in the classroom is to bring up or help out less able students. However, heterogeneous grouping does have some benefits, such as providing opportunities for Māori students who are gifted in being of service to others to use their abilities. Patrick, Bangel, Jeon, and Townsend (2005) call for a careful balance of grouping practices, urging that:

*it is imperative to move beyond a simplistic argument that either heterogeneous or homogenous ability grouping lead to good or bad outcomes; the type of task and the cognitive and interactive processes involved are important factors to take into consideration.*

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### Tiered activities

Tiered activities, in which all students work with the same essential skills but in different directions based on needs, can complement grouping. When instruction is tiered, students work in different groups of varying sizes, learning the same concept but in different ways. The class works towards the same learning objective, but the teacher differentiates the content, process, or product for different groups according to their learning needs.

### Menus, choice boards, or a game of noughts and crosses

Multiple menus enable students to make choices about how they will meet their learning goals. Their teacher offers a choice of activities or tasks that lead to the achievement of the objective.



### Consulting teacher

Another option for meeting the needs of gifted and talented students is to have a specialist teacher working in the regular classroom with individuals or small groups. This requires close communication and co-operation between the specialist and the regular classroom teacher. In some cases, the consulting teacher may work alongside the regular classroom teacher, supporting the teacher's development of specialised opportunities for the gifted and talented. The consulting teacher may therefore work either directly or indirectly with gifted and talented students within the regular classroom setting.

### Individualised education plans (IEPs)

IEPs are based on assessment and team planning and involve setting goals for individual students. These plans reflect what the student already knows, what the student needs to learn, and what differentiated activities are to be offered. The involvement of teachers, curriculum specialists, parents, and especially the students themselves ensures a plan that meets unique cognitive and affective needs. Planning, monitoring, and reviewing are crucial to the success of IEPs. Effective IEPs require commitment and communication and can be very time-consuming.

### Integrated curriculum

This option uses broad-based conceptual themes. It integrates multiple disciplines, allowing learning across wide issues. For example, the future-focused issues of sustainability, citizenship, enterprise, and globalisation are ideally suited for integrated learning across a range of learning areas. This approach may be used with all students, with gifted and talented students being given the freedom to pursue topics of choice in accordance with their needs and interests.

### Distance education

Another possibility worth exploring, particularly for rural students, is distance learning. The Correspondence School, for example, allows the top 5 percent of students in any age group to study extra subjects in a variety of areas when the school they are attending is unable to provide appropriate enrichment and acceleration. Similarly, some tertiary education institutions may enrol students in distance classes. There are also online classes, such as GO: Gifted Online ([www.giftededucation.org.nz/giftedonline.html](http://www.giftededucation.org.nz/giftedonline.html)).

Distance education allows students to pursue subjects that are outside the normal school offerings in a manner that matches individual rates of learning. The courses can be facilitated in the student's usual classroom environment, with guidance and flexibility from the teacher.

### Beyond the regular classroom

While the needs of some gifted and talented students may be adequately met within the regular classroom, others may find their most optimal learning experiences outside it. The possibilities outside the classroom are many and, with planning and forethought, can work successfully for individual students. Consider the options described below.

### School-wide organisational strategies

Administrators and teachers can consider several school-wide organisational strategies: clustering, cross-age or multi-level grouping, looping, and centres or academies.

**Clustering** is an organisational strategy that places gifted students in a syndicate or year level in a class, usually in groups of three to five, together with the rest of their class. This purposeful placement of students moves away from a “pepper-pot approach” (Riley et al., 2004, page 89), giving peers who share interests and abilities opportunities to learn together. Gentry’s (1999) research has shown that this strategy is highly effective in both meeting students’ needs and keeping costs down.

**Cross-age or multi-level grouping** determines classroom placement on the basis of student achievement rather than age or grade levels. Many New Zealand primary and intermediate schools organise themselves in syndicates of cohorts of classrooms across several levels, which makes it possible to use cross-age grouping for at least part of the day, often matched to student strengths. Similarly, composite classes (of multiple levels) provide opportunities for students to work at levels beyond their age expectancy. For in-class acceleration in multi-level classes, the gifted student needs to be in the younger age range.

**Looping** is a simple strategy that allows a teacher to remain with a class of students for two or more years. This strategy supports the development of an ongoing relationship between teachers and learners and long-term opportunities for differentiation. An example that combines several of these approaches at the secondary level is the gifted and talented programme at Rutherford College, which groups senior secondary students in a form class with a specialist teacher (Russell and Riley, 2011).

**Centres or academies** have been developed by some schools in New Zealand – a “school within a school” approach. This strategy groups students according to their curricular strengths and interests (see, for example, Feilding Intermediate School’s explanation at [www.feildingintermediate.school.nz/](http://www.feildingintermediate.school.nz/)).

These strategies, all administratively easy to implement and cost effective, are an important way of providing gifted and talented students with qualitatively differentiated learning opportunities.

### Special classes

Specialised classes for gifted and talented students offer broader depth and complexity, usually at a faster pace. Telescoping (for example, when students complete three years’ work in two) can sometimes complement these classes. To ensure successful qualitative differentiation rather than “more of the same”, a skilled teacher needs to work within full- or part-time classes for gifted and talented students. Scholarship classes in secondary schools are an example of such classes.



## Early entrance

This option, which suits students who have advanced academic skills across a range of areas, allows them to enter intermediate, secondary, and tertiary education at an earlier age than usual. For this to be successful, it is essential that the students participate willingly and both their academic and their social-emotional readiness are adequately assessed.

Institutional flexibility is also needed to waive entry requirements and perhaps assist parents with costs, timetabling, and transportation – the logistics of making it possible.

When families are unable to provide the necessary financial support, schools need to consider outside sources of funding, such as scholarships sponsored by business or civic groups.

## Full-year acceleration or “grade skipping”

Students may be advanced by a grade or level of their education by being moved ahead during or at the beginning or end of an academic year. In this strategy, students are placed one year ahead of where their age indicates they should be, for example, a student may move from year 7 to year 9, skipping year 8. Factors to consider when making decisions about grade skipping include the student’s desire to move ahead, teacher receptivity, family support, and whether a sibling is in the old or new grade. The Iowa Acceleration Scale (1999) is a useful guide when considering grade skipping.

## Pull-out or withdrawal programmes

In these programmes, part of the regular school time for gifted and talented students is set aside to group them with other students of similar interests or abilities. Students are regularly removed from their normal classroom setting for work with a specialist teacher in a resource room where they can take part in mini-courses, seminars, field trips, or sessions with a special guest. Some may join community-based withdrawal programmes such as the one-day-a-week programmes offered by the Gifted Education Centre ([www.giftededucation.org.nz](http://www.giftededucation.org.nz)) and Gifted Kids ([www.giftedkids.co.nz](http://www.giftedkids.co.nz)), services such as Gifted Seminars on Wheels ([www.giftedseminars.org](http://www.giftedseminars.org)), or the programmes offered by the New Zealand Marine Studies Centre ([www.marine.ac.nz](http://www.marine.ac.nz)). Such programmes enable them to explore topics and ideas at a greater depth and/or breadth than is often possible in a regular classroom.





Schools and other providers may vary withdrawal time from an hour a week to a full day per week. It is also common for schools to vary the topics so that a wide range of students gets to participate. Students working in this sort of arrangement may miss some other classroom opportunities or receive fragmented instruction from the curriculum, so close communication between teachers is essential.

The use of pull-out or withdrawal programmes must be considered with care. If the learner is moved from a culturally safe, comfortable environment into a situation in which they are isolated from peers they feel at ease with, the gifted provision may do more harm than good.

### Mentorships

Mentorships team an experienced older student or adult (the mentor) with a student of similar interests and abilities (the mentee) so that the mentee can gain new skills and knowledge. Usually conducted outside school settings, this provision may work best in conjunction with independent or small-group study.

For this option to be viable, a flexible timetabling arrangement is needed, as well as a clear understanding of the intended purposes and outcomes of the mentorship. The mentors may be drawn from any field: business and industry, health, the arts, research, and so on. Online mentoring (called “telementoring”) is also an option. As previously mentioned, the mentor approach may be appropriate for nurturing giftedness in some Māori students, taking either a tuakana–teina approach within the school or drawing on an appropriate person in the local Māori community.

The role of the mentor is not simply to impart information about their skills or profession, but to nurture the social and emotional aspects of giftedness through empathetic companionship. Schools need to facilitate mentorship programmes by offering training to mentors and students on their roles in the partnership and appointing a school-based co-ordinator.

### Concurrent enrolment

Also called dual enrolment, this option allows students to enrol in either secondary or tertiary courses while still at primary, intermediate, or secondary school, usually as single-subject acceleration. This arrangement may require the student to be physically present at two institutions or may involve distance education. Students normally pursue this option in a limited number of subject areas, generally in their primary area of academic ability. STAR funding may be used to facilitate this option. It is important to remember that the relationship with the provider is a partnership in which the school has primary responsibility for the student’s welfare.

### Competitions

Competitions serve as an ideal platform for gifted and talented students to display their skills and abilities. Many schools already participate in a range of competitions, including science fairs, examinations, short film competitions, and technology challenges. Competitions allow students to pursue their interests, demonstrate their strengths, and often be grouped with students of similar abilities. This option must be well facilitated so that students understand that participation is more important than winning prizes. Future Problem Solving New Zealand ([www.fpsnz.co.nz](http://www.fpsnz.co.nz)) provides a very successful programme, with students excelling in national and international competitions. Science OlympiadNZ ([www.scienceolympiadnz.org.nz](http://www.scienceolympiadnz.org.nz)) is another example of an organisation that works with competitions for secondary students, and Ngā Manu Kōrero is a well-established national speech contest for Māori students at secondary level, with Māori and English sections.

### Clubs and electives

As a regular part of the timetable, either during class or at lunchtime, this option is normally open to many or all students and may cover hobbies and areas of interest or expertise. The range of topics is vast – from stamp collecting, chess, literature, and photography to debating, quilting, music appreciation, and archery. Schools often need community and parental involvement to be able to offer such activities to students.

### Cluster groups

In cluster groups, students from one or more levels are placed in a learning situation with a teacher who possesses similar special skills or interests (Renzulli and Reis, 1994). Cluster groups cut across classrooms – students move in and out of their regular setting to one that enables further, in-depth study. Grouping of this sort capitalises not only on students' strengths and interests but also on those of staff and community members. These groups may be academic in nature (for example, a maths specialist working with a mixed-age group of high-ability mathematicians) or interest derived (for example, a photography buff working with a group of budding photojournalists).

### Virtual instruction

The Internet can serve as an avenue for both information and interaction. Online programmes have become more common. Schools that are able to support such study should investigate these avenues.

The Gifted Online website (<http://ultranet.giftededucation.org.nz/Home>) is one example. It uses computer technology and distance learning to enable students, especially those in rural and isolated communities, to participate in the One Day School programme run by the Gifted Education Centre (see below). Students who are seeking advanced, accelerated learning opportunities could also investigate overseas programmes such as those offered by Stanford University (<http://epgy.stanford.edu>).

## Special programmes

Many of the suggestions made above are offered as special programmes. Other programmes are described below.

### One-day-a-week programmes

These are withdrawal or pull-out programmes run by specialist teachers who work one day a week with gifted students from a number of schools. They provide opportunities for young people to interact with others with similar abilities and interests as they engage in learning opportunities designed to extend and challenge them. The two major providers of these programmes are the Gifted Education Centre ([www.giftededucation.org.nz/aboutus.html](http://www.giftededucation.org.nz/aboutus.html)) and the Gifted Kids programme ([www.giftedkids.co.nz](http://www.giftedkids.co.nz)), which operate classrooms in different parts of New Zealand. Other organisations have also adopted this model. Each provider of one-day-a-week programmes has different target students, identification procedures, curricula, costs, resources, and so on.

### After-school and holiday programmes

More opportunities for gifted and talented students exist outside school hours in the form of specialised programmes after school, on weekends, and during holidays. These include summer camps, sports activities, seminars, and workshops or clubs offered by organisations such as the New Zealand Association for Gifted Children and other support groups, including the North Canterbury Support for Gifted and Talented Children. Most of these activities involve fees and are available at different times during the year in limited locations throughout the country.

It is important for educators to be aware of such opportunities so that parents and students can be informed of choices beyond the school itself. Schools may also choose to use these resources in their own programmes as options or for expertise. Students should not be disadvantaged because of their socio-economic status, and schools should endeavour to offer assistance when they can.



### School regional clusters

Schools may also be able to work together, or at least in conjunction with one another. Schools within regions may choose to share resources, staffing, and specialised curriculum strengths in order to offer a cohesive educational package for their gifted and talented students.

Teachers (and/or students) could network to share ideas, programmes, and professional development opportunities. In some regions of New Zealand, these clusters have had the benefit of external initiatives such as the Rural Education Activities Programme. (There are examples of these types of network on the TKI gifted and talented community site.)

Another major way for schools to work together is to establish communication between primary, intermediate, and secondary schools so that schools create smooth transitions for students and continue to meet the needs of gifted and talented students.

## Curriculum development and curriculum models

Developing and implementing programmes for gifted and talented students requires schools to consider the curricula they offer their students. *The New Zealand Curriculum* describes curriculum design and review as “a continuous, cyclic process. It involves making decisions about how to give effect to the national curriculum in ways that best address the particular needs, interests, and circumstances of the school’s students and community” (2007b, page 37).

The term “curriculum” can be defined as “a set of planned experiences for a targeted population” (Van Tassel-Baska, 1994, page xvi). For gifted and talented students, those experiences should be differentiated in relation to the content, processes, and products of learning and should incorporate opportunities for both acceleration and enrichment. They should also be coherent. This means that the learning experiences should have clear, attainable learning outcomes that are carefully sequenced within a prescribed time frame. The curriculum should also be comprehensive, taking into account all the cognitive, social, cultural, and emotional needs of gifted and talented students.

Developing a comprehensive and coherent curriculum ensures the longevity of gifted programmes by putting on paper the school’s intentions for its gifted and talented students. It also means these programmes are not fragmented, ensuring that the needs of gifted and talented students aren’t met by accident but are consciously addressed both within and beyond the classroom.

Designing a curriculum that is appropriately differentiated to address the diverse needs, strengths, and identities of gifted and talented students can seem a daunting task. It can be made easier through use of a curriculum model. These models, ranging from theoretical to practical, abstract to concrete, have been developed and implemented by educators of gifted and talented students throughout the world.



## Criteria for selecting models

Schools may choose to adopt a specific model or adapt several models to suit their needs. The goal in selecting and adapting models for curriculum development is to create educational programmes that enhance the strengths and abilities of gifted and talented students. Suitable models have purposes and procedures that support the implementation of qualitatively differentiated learning experiences. Schools should select models that reflect their definition and identification procedures and will foster opportunities for learning that combine enrichment and acceleration.

Maker and Nielson (1995) propose the following criteria for selection:

- appropriateness to the situation
- comprehensiveness
- flexibility or adaptability
- practicality
- validity.

New Zealand educator Angela Bell recently formulated a more detailed list of criteria, based on her review of the literature. According to Bell (2010), a suitable curriculum model:

- is flexible in that it can be adapted for use across age groups, year levels, and areas of giftedness
- is accessible in terms of available resources and support for implementation within a New Zealand context
- is based on sound practice and has been regularly evaluated as having a foundation in the research within the field of gifted education
- allows for differentiation in content, process, product, and learning environment to cater for individual learning needs and allows for expansion in breadth, depth, and pace tailored to each student
- addresses the specific social and emotional needs of gifted learners
- is easy to implement in that it is explicit, well explained, and well sequenced
- is aligned with the revised New Zealand curriculum
- can be adapted for use cross-culturally and specifically within a New Zealand context, with an emphasis on its suitability for Māori gifted and talented learners.

## Examples of curriculum models

This section examines five models that have been used in New Zealand schools: the Enrichment Triad Model (Renzulli, 1977), the Autonomous Learner Model (Betts, 1985), the Integrated Curriculum Model (Van Tassel-Baska, 1997), the Parallel Curriculum Model (Tomlinson, Kaplan, Renzulli, Purcell, Leppien, and Burns, 2002), and the REACH model (Cathcart, 2005).

The key similarity about these models is that they support students to develop and use metacognitive knowledge and skills and higher order thinking in rich tasks that are meaningful for them.



### Enrichment Triad Model

Developed by Renzulli, the Enrichment Triad is perhaps the most widely used curriculum model in gifted education. Originally proposed in 1977, it has evolved into the Schoolwide Enrichment Model (Renzulli and Reis, 1985). It's an approach to gifted education that enhances the regular classroom programmes with a number of provisions we have already discussed. The model was initially intended for primary schools but has since been adapted for secondary schools in the Secondary Triad Model (Reis and Renzulli, 1985).

The model consists of three interrelated types of enrichment:

- Type I – general exploratory activities (enrichment)
- Type II – group training activities (process)
- Type III – individual and small-group investigations of real problems (product).

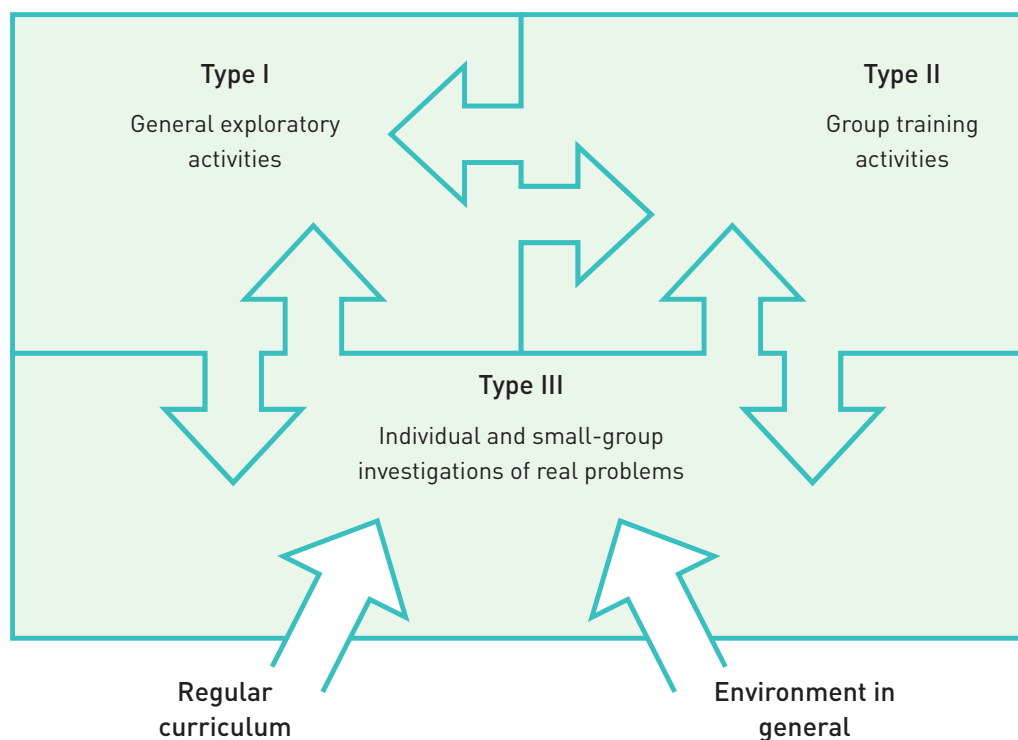
The two examples of cultural responsiveness in relation to content and product presented in table 4 (page 59) could be categorised as Type III activities. The student who was placed in charge of the production and those who developed children's books all had to use advanced-level content, develop methodologies, and increase their skills in product development and self-directed learning in order to achieve their goals.

These three types of enrichment are not sequential but tend to flow freely from one to the other. As shown in the example below, students' activities may move from Type I to Type III and back into Type II.

#### Example

Imagine a classroom of students who are listening to a storyteller (Type I activity). During the storytelling, a group of students show obvious enthusiasm and interest and so spend an additional hour learning storytelling techniques (Type II activity). Then one student decides that she'd like to create her own story to share at the city's storytelling festival (Type III activity). In writing the story, she discovers she needs more information about her chosen topic (Type I activity) and then considers the design of a costume (Type II activity).



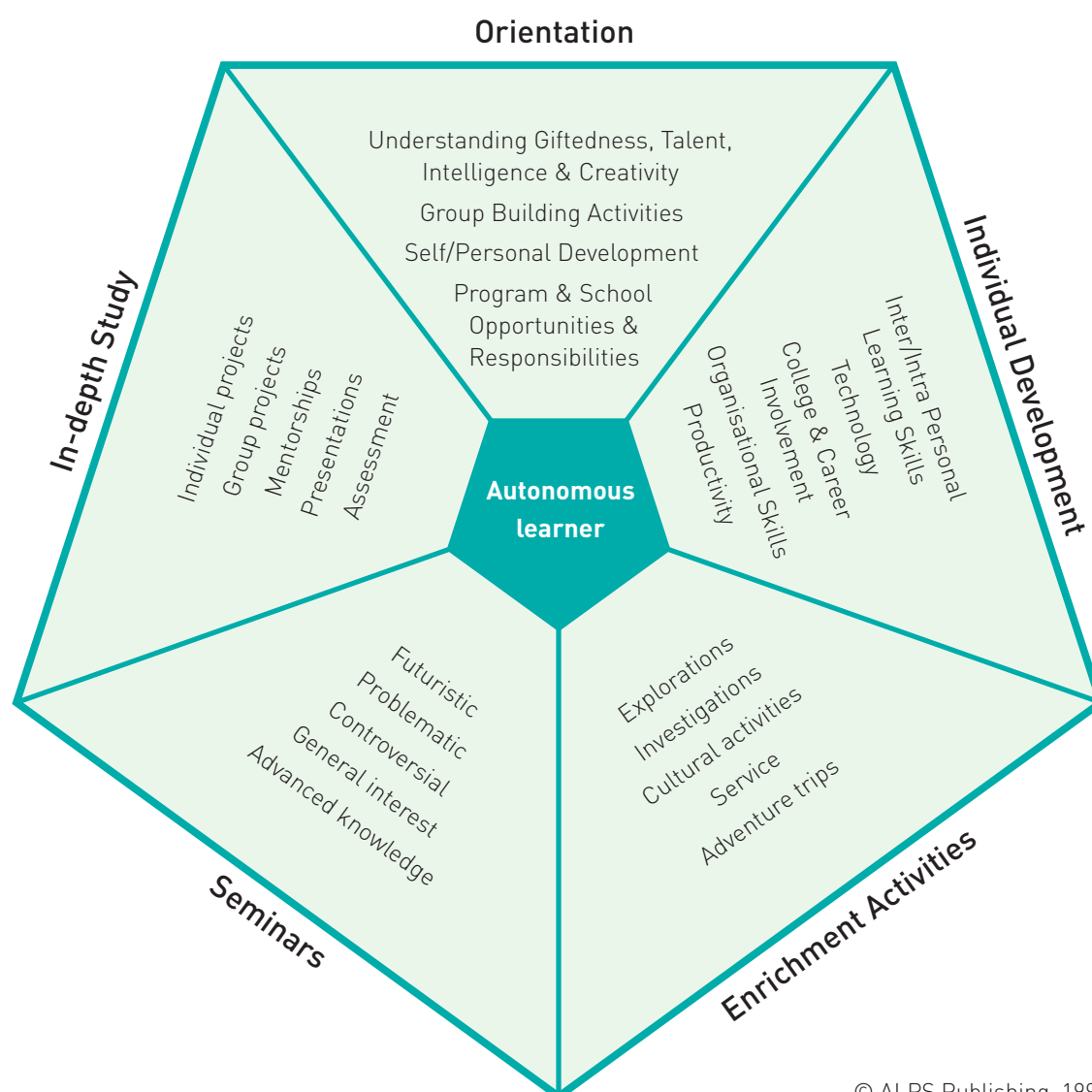


*Figure 5. Enrichment Triad Model*

Although the Enrichment Triad Model offers a firm base for gifted programmes, along with supporting practice and research, a valid criticism is that it is focused predominantly on enrichment. When it is used as part of a school-wide plan or in conjunction with other provisions, however, acceleration opportunities can also be offered. The model is flexible, practical, and appeals to teachers and students alike.

### Autonomous Learner Model

Originally developed by Betts in 1985, this model focuses primarily on meeting the cognitive, emotional, and social needs of gifted and talented students in years 1–13 by developing autonomy and lifelong learning. It aims to give students the content, process, and product know-how that enables them to take responsibility for developing, implementing, and evaluating their own learning. The model is now being used to individualise learning for all students. In the United States, the process is called Response to Intervention. The model has five interactive dimensions: orientation, individual development, enrichment, seminars, and in-depth study (see figure 6).



© ALPS Publishing, 1999

*Figure 6. Autonomous Learner Model*

**Orientation** gives students and teachers an opportunity to develop a foundation for the programme. Students are introduced to the structure of the programme, including the activities and their own responsibilities. They take part in group-building and self-understanding exercises.

**Individual development** serves as a launching pad for giving students the cognitive, emotional, and social skills, concepts, and attitudes they need for lifelong autonomous learning.

**Enrichment activities** are designed to allow students to explore a variety of concepts and ideas and begin to develop their own content, processes, and products.

**Seminars** serve as an avenue for groups of students to research a topic and present a seminar to other students, thus shifting the responsibility for learning from the teacher to the learner.

**In-depth study** is the most demanding and challenging dimension of the model. Here small groups or individual students are given the freedom to pursue their own areas of interest. In-depth study integrates the other dimensions of the model, much as Type III enrichment does in the Enrichment Triad Model.

Van Tassel-Baska and Brown (2009) warn that there is no research evidence to support the effectiveness of the Autonomous Learner Model. However, it has proven popular, partly because of its ease of application across different age groups and learner areas. School leaders at one large New Zealand secondary school say that it enabled them to develop a programme that:

*provides an opportunity for like-minded students to meet regularly and engage in activities that demand higher order thinking skills while fostering an appreciation of the important roles that persistence, determination and task commitment play in the pursuit of successful and independent life-long learners.*

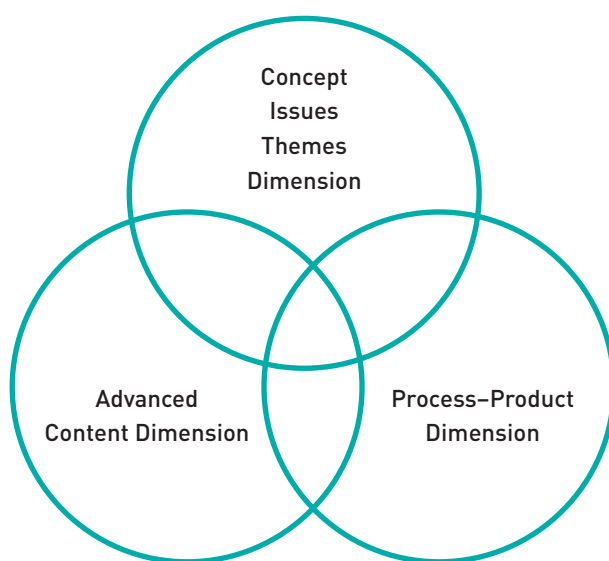
Farthing, Irvine, and Morgan, 2006, page 30

### Integrated Curriculum Model

Van Tassel-Baska's Integrated Curriculum Model has three main elements:

- Disciplines of study are framed through an emphasis on advanced content.
- Higher order thinking, processing, and products are developed.
- Learning experiences are created around major concepts, issues, and themes that reoccur in real-world applications and theoretical understandings within and across disciplines (Van Tassel-Baska, 1997).

Figure 7 demonstrates that these three elements or dimensions are interlinked.



Van Tassel-Baska, 1997

**Figure 7. Integrated Curriculum Model**

There is sound research underpinning the Integrated Curriculum Model and the curriculum units that have been developed to support it. However, professional development is key to its successful implementation (Van Tassel-Baska et al., 2009), and Riley (2011) warns that the model units are closely aligned to the United States context and would require careful thought to ensure they are appropriately adapted for use in New Zealand.

### Parallel Curriculum Model

The Parallel Curriculum Model (Tomlinson et al., 2002) is a relatively recent model that has yet to be tested by research. However, it is built on a sound platform of prior research. Its primary focus is the development of an effective and excellent curriculum for every student in which the intellectual demand ascends as appropriate for gifted and talented students. In essence, the model functions as a catalyst for identifying potential as well as enhancing it.

There are four strands in the Parallel Curriculum Model:

- The Core Parallel comprises the key concepts, principles, information, and skills of a discipline. In New Zealand, these are encapsulated within the national curriculum documents.
- The Curriculum of Connections asks students to make connections between ideas and knowledge within and across disciplines, times, cultures, and locations.
- The Curriculum of Practice invites students to think and work as if they were practitioners in the disciplines within which they are learning.
- The Curriculum of Identity engages students in thinking about their personal connections to their learning, reflecting on how it might affect them now and in the future.

The four parallels can be used separately or in different combinations to address individual needs. This model has the potential for successful adaptation to the New Zealand educational context.

### REACH model

REACH, developed by the New Zealand educator Rosemary Cathcart, is the model that underpins the One Day School programmes offered by the Gifted Education Centre ([www.giftededucation.org.nz](http://www.giftededucation.org.nz)) and the Certificate for Effective Practice in Gifted Education offered by REACH Education ([www.giftedreach.org.nz](http://www.giftedreach.org.nz)). Based on New Zealand's child-centred approach, the model considers the gifted learner holistically and identifies the full range of learning and developmental needs they may have. The model includes five key concepts for embedding content, process, and product differentiation:

1. *Generating a high level of interest in learning*
2. *Developing the "tools of thought"*
3. *Developing intellectual and creative potential*
4. *Fostering emotional, social, and ethical development*
5. *Evaluating our learning*

REACH Education Consultancy, 2006

While these concepts appear to be universal, their significance for gifted learners is different. For example, all students need to learn the "tools of thought", but gifted students need more independent learning skills than most of their peers. They may also have a strong interest in the ethical implications of some of the topics they study. This means they need opportunities to develop advanced reasoning and critiquing skills.



## Starters for inquiry

*How can we provide for gifted students in a culturally appropriate way?*

Bevan-Brown, 2009, page 6

### Is the programme sufficiently differentiated?

Think about what is happening in your school already. How are teachers in your school differentiating in their classrooms? What difference does this make to student learning? What evidence do you have of the success of these strategies? Are gifted and talented students being provided for in culturally appropriate ways?

Passow (1996) poses three questions that teachers and other providers can use to determine whether their programmes are appropriately differentiated for gifted and talented students:

1. *Is this an activity every child should be doing?*
2. *Is this an activity every child would like to do?*
3. *Is this an activity that every child is capable of doing?*

cited in Rogers, 2002, page 272

If the answer to any of these questions is yes, then the programme is not sufficiently differentiated to meet the needs of gifted and talented students.

With the answers to these questions in mind, consider the questions in the inquiry and knowledge-building cycle (figure 2, page 18).

- What will be the key features of our revised school provisions?
- What do we expect to see teachers doing differently in their classrooms?

### Questions to consider before choosing acceleration

One way of providing acceleration is by moving a student to a classroom with an older age group. Before making such a decision, there are a number of questions to consider that require input from all those affected. These include:

1. *Will the new teacher differentiate learning for the child?*
2. *Is the child willing to take the emotional leap of being with a new group of children?*
3. *How will they be supported (for example, by a buddy, a teacher, a counsellor) into the new environment?*
4. *Is a trial period (for example, six weeks) appropriate?*
5. *Prior to acceleration, have there been opportunities to interact with older children?*
6. *Is the child's ability at the top end of the new class?*

Ministry of Education, 2008b, page 105

## Readings and resources

### *A Nation Deceived*

*A Nation Deceived* is a national report by three American educators (Colangelo et al., 2004) who surveyed the research on acceleration and emerged passionate about its value as an effective and virtually cost-free intervention for gifted students. They offer information to help schools administer their acceleration programmes. Educators and parents are encouraged to have conversations about accelerating gifted students, based on the following three questions:

1. *Have we done a comprehensive assessment of your child to know his/her readiness?*
2. *Given the readiness, what is the best type of acceleration we can implement?*
3. *We know that in a very few cases acceleration is not effective. What can we do, as a school, to maximize the success of your child?*

Colangelo et al., 2004, page xi

### Providing for gifted and talented Māori students

Bevan-Brown's (2009) article "Identifying and Providing for Gifted and Talented Māori Students" includes practical suggestions for incorporating Māori content into a range of curriculum areas.

### Out-of-school opportunities for learning

The following three articles provide information about how schools can make the most of out-of-school opportunities for gifted and talented students.

Riley, T. L. (2007). "Beyond the School Gate: Provisions for Gifted and Talented Students". *Set: Research Information for Teachers*, no. 2, pp. 7–12.

Riley, T. L. (2007). "Making the Most out of School Provisions for Gifted and Talented Students". *New Zealand Principal*, vol. 22 no. 3, pp. 4–6.

Riley, T. L. (2007). "Making Decisions about out of School Opportunities for Gifted and Talented Students". *Tall Poppies*, vol. 32 no. 2, pp. 3–9.

### Curriculum models

#### Enrichment Triad Model

Further information about the Enrichment Triad Model (called here the Schoolwide Enrichment Model) is available at [www.gifted.uconn.edu/sem](http://www.gifted.uconn.edu/sem)

#### Autonomous Learner Model

You can find out more about the Autonomous Learner Model from websites such as <http://nmgifted.org/ALM/intro.html>

#### Integrated Curriculum Model

You can read more about the Integrated Curriculum Model at <http://education.wm.edu/centers/cfge/curriculum/index.php>

You will find links to examples of curriculum units based upon the model at <http://education.wm.edu/centers/cfge/curriculum/teachingmodels/index.php>

### Parallel Curriculum Model

You can find out more about this curriculum model on the National Association for Gifted Children (USA) website at [www.nagc.org/index.aspx?id=1069](http://www.nagc.org/index.aspx?id=1069)

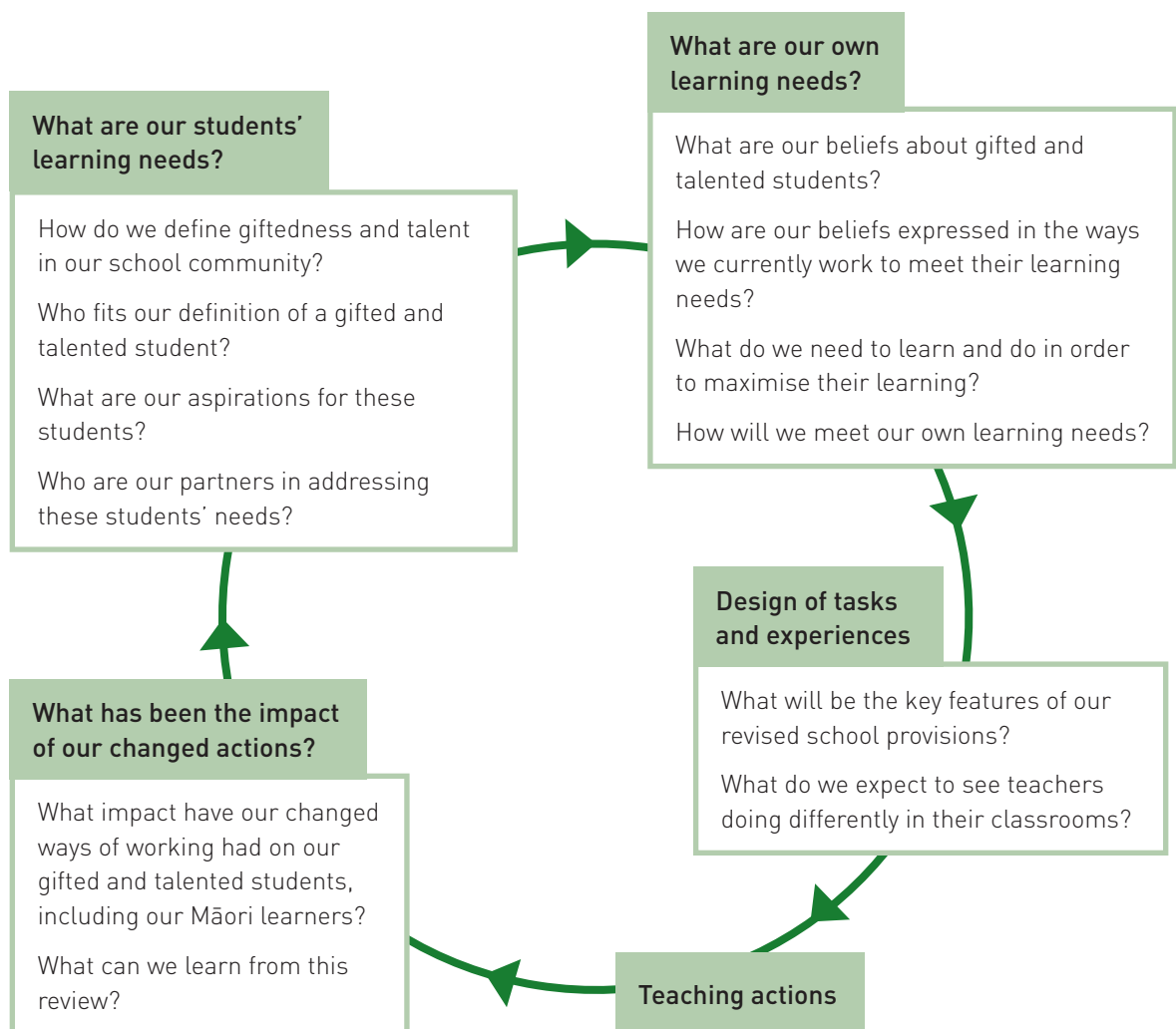
#### Summary: Differentiated programmes for gifted and talented students

- The purpose of defining and identifying giftedness and talent is to uncover individual abilities, qualities, and interests, and the purpose of differentiation is to further develop them.
- Within qualitative differentiation for gifted and talented students, there are three primary areas of differentiation: content, process, and product. Differentiation transforms the learning environment.
- In a culturally responsive learning environment, teachers value and support cultural diversity and demonstrate this in the adaptations they make to content, process, and product.
- A responsive learning environment approach, in which rich and stimulating learning experiences can take place, helps to challenge gifted and talented students and to ensure that their special abilities are nurtured, developed, and recognised. The term culturally responsive environment approach reflects the importance of being responsive to the strengths and needs of all gifted and talented students, including those whose cultural background differs from the majority culture of the school.
- When planning and implementing differentiated programmes for gifted and talented students, schools should utilise both enrichment and acceleration and offer a continuum of provisions.
- Schools offer a continuum of opportunities for gifted and talented students by tailoring the options to meet individual students' needs.
- The national curriculum documents provide the overall framework for developing curricula for students in New Zealand schools. Schools can also use internationally recognised curriculum models to help them design curricula that are appropriately differentiated for gifted and talented students.



## Component 5: Ongoing self-review

Ongoing self-review of the school's provision for gifted and talented students is essential to ensure accountability and improvement. The assessment of higher order thinking, creativity, and the social-affective domains is notoriously complex and difficult, even for experts in the field. It helps to remember that the same principles that underpin the self-review of other aspects of schooling also apply to reviewing the provision for gifted and talented students.



### *An inquiry and knowledge-building cycle for improving provision for gifted and talented students*

The review process should be systematic, ongoing, and comprehensive. The model of collaborative inquiry outlined on page 18 and illustrated in figure 2 (reproduced above) integrates self-review through all stages of the inquiry while also indicating the need for regular formal reviews of the impact of the school's provision on the students.



The teaching-as-inquiry model outlined in *The New Zealand Curriculum* (2007b) is founded on the same premise: that “effective pedagogy requires that teachers inquire into the impact of their teaching on their students” (page 35).

A collaborative approach increases the validity of self-review by providing a wide range of perspectives, including those of students, teachers, and whānau. At a practical level, it allows the self-review process to be developed together and for tasks to be shared. However, self-review should also include opportunities for individual reflection on how particular actions have affected students. The learning from self-review is likely to be deeper when there is support from an external expert such as a professional development provider (Timperley et al., 2007). It is likely to have a greater impact when school leaders participate in the process (Robinson et al., 2009).

For effective self-review, schools must have developed written guidelines that include their definition of giftedness and talent, identified the students who best fit that definition, and articulated their aspirations for those students. Figure 2 (reproduced on page 80) shows that at the start of each cycle of inquiry:

- school communities need to have consulted on their aspirations for the students
- schools must already have identified what it is that teachers and others in the school community need to improve to achieve those aspirations.

All these intended outcomes need to be described in such a way that they can be measured and the feedback used for ongoing improvement of the school’s provision.

The initial review should focus on the overall effectiveness of the school’s approaches to improving the outcomes of the gifted and talented. To ensure there is ongoing improvement to each of the key components (concept, characteristics, identification, programmes, self-review) and to the coherence between the components, each aspect of the school’s provision needs to be reviewed as well. The inquiry questions and the summaries for each of the components are useful guides in reviewing each aspect.

When schools choose to use a particular curriculum model to develop their programme, their self-review process should align with the theories that underpin that model. For example, schools using the Autonomous Learner Model will ask questions about how successfully their programme is providing individualised learning opportunities that foster a sense of independence in students. The Enrichment Triad Model (Renzulli and Reis, 1985; see <http://www.gifted.uconn.edu/sem>) contains examples of parent and student questionnaires, a student product assessment form, an evaluation form for Type I enrichment, and a scale for evaluating materials for teaching creativity.

Whatever approach is used, it is important to ensure the robustness of the review by using a range of both quantitative and qualitative methodologies, including student achievement data, observation, interviews, and questionnaires. A full analysis of the impact of a particular approach and any future implications will require collation of the data and allocation of resources for the review.

## Methods of self-review

As we have seen, for self-review to be reliable, it must use a range of qualitative and quantitative methodologies. The methods for identifying giftedness and talent outlined on pages 44–49 can also be used for reviewing the effectiveness of a school's provision for these students. Indeed, the initial data will form a large part of the baseline data for measuring change. As discussed on pages 43–53, those methods should include both formal methods (such as tracking the results of standardised tests and developing student portfolios) and informal methods (such as teacher observation and the use of rating scales). Schools are increasingly using digital methods to help them track student progress.

Data on student progress will always be the touchstone of self-review, but school communities need to be able to understand how specific actions and decisions by teachers, school leaders, and others impact on students. The methods of data collection discussed below are intended to help schools explore that relationship.

Programme evaluation commonly uses data from classroom observation. Schools can devise observational checklists that relate to the goals of the programme, as well as to teachers' professional learning goals and criteria for improvement. The checklists can be used to observe and record evidence of teacher actions and student responses. Further evidence can be gathered by interviewing selected students. It is best if the observer simply records what they observe. The conversation that follows should help the teacher to reflect on how their practice is impacting on their gifted students. At the end of the conversation, the observer supports the teacher to decide on any changes they wish to make to their professional learning goal and the accompanying criteria.

Teachers' diaries and daily logs that focus on key areas of the programme give rich data on actual achievements or omissions in relation to programme goals and objectives and teachers' own learning goals. Specific incidents with particular students help to enrich such evidence. In a trusted community of learners, this evidence can contribute powerfully to group learning about how better to cater for gifted students.

Student self-assessments give valuable information about the programme. Students can be guided to focus their evaluations on educational goals that are key features of the programme – for example:

The programme helped me to increase my creative thinking:

1. a great deal
2. quite a bit
3. not at all.

This kind of evaluation helps to increase the validity of self-assessments. Self-assessments can also help to complement information on the affective domain, including attitudes, which is an important aspect of programme evaluation.

Interviews and questionnaires are among the most commonly used methods of evaluating gifted and talented programmes. Interviews are typically carried out with students and parents. Interview schedules should be prepared with care to focus on key aspects of the programme and should be structured in an open-ended way. Analysing the responses from interviews is demanding and time-consuming, so the aim is to sample only as many subjects as are necessary to yield reliable results.

Questionnaires are effective in capturing a wide range of programme attributes. However, care is needed to keep questionnaires from becoming too long. Most of the questions should be closed (which makes them easy to score), but one or two open-ended questions (such as “What did you like about the programme?” and “How could the programme be improved?”) are always worthwhile.

Focus groups are a useful interview forum for reviewing the effectiveness of programmes. They are a particularly efficient first step in the self-review process – even ahead of individual interviews or questionnaires. They provide a variety of responses that can be used to develop questions for structured interview schedules and for questionnaires. Groups of seven or eight students, parents, and whānau members are ideal. Questions for the focus group should be open and broad ranging, and honest and open discussion should be encouraged. The role of the focus group leader is to facilitate the discussion.

## Evaluating professional development

As discussed earlier, professional learning is an important part of improving provision for gifted and talented students. Effective provision of learning opportunities for gifted and talented students requires professional development for teachers and school leaders.

Just as the programme for students needs to be reviewed and evaluated, so too does the professional learning and development for teachers. Guskey (2002) proposes a model for evaluating professional learning and development that consists of five critical levels of evaluation. The levels build on each other so that success at one level is usually necessary for success at higher levels. The levels are:

- Level 1: Participants’ reactions: Examine participants’ reactions to the professional development experience.
- Level 2: Participants’ learning: Measure the knowledge and skills the participants gained.
- Level 3: Organisational support and change: Gather information about the organisational characteristics and attributes necessary for success.
- Level 4: Participants’ use of new knowledge and skills: Ask whether the participants’ new learning made a difference to their practice.
- Level 5: Student learning outcomes: Investigate how the professional development activity affected the students.

Each level requires the inquirer to ask a different set of questions and use a different set of tools. Success at one level does not guarantee success at another. Guskey contends that, while it is not possible to prove that a professional development programme has contributed to specific gains to student learning, you can gather good evidence to support that contention and use the information gained through the inquiry to improve the quality of professional development.

## Starters for inquiry

### Self-review tools and checklists

Since the first edition of this handbook was published, our understandings about school self-review have increased. The Ministry of Education has published a number of rubrics that schools can use to inquire into their effectiveness and plan for improvement. These include:

- the National Standards self-review tools (<http://nzcurriculum.tki.org.nz/National-Standards/Self-review-tools>)
- The Measurable Gains Framework<sup>7</sup> ([www.minedu.govt.nz/theMinistry/PolicyAndStrategy/KaHikitia/MeasuringandReportingProgress.aspx](http://www.minedu.govt.nz/theMinistry/PolicyAndStrategy/KaHikitia/MeasuringandReportingProgress.aspx)).

While these tools do not focus specifically on gifted students, they provide a model for schools to develop rubrics that do. Alternatively, schools can use or adapt self-review tools and checklists such as the self-review questions and indicators that ERO used in its June 2008 review or one of the tools contained in the appendices.

Appendix 1 is the checklist for school guidelines developed by Riley (2000).

Appendix 2 is a tool (developed by the Ministry's gifted and talented education advisers) that allows schools to review their provision and assess their strengths and needs.

Appendices 3 and 4 both provide ways for school communities to reflect on giftedness through a Māori cultural lens.

More recently, Bevan-Brown (2011) has developed a checklist of questions that schools could consider when reviewing their provision for gifted students from minority cultures. This is presented in Appendix 5. Such a review could be included in a larger, school-wide cultural self-review.

Riley and Moltzen (2010) took a participatory action research approach to their evaluation of three New Zealand research and development projects. They structured the evaluation around three big questions: What is going on? Is it working? How do we know? Appendix 6 lists the sub-questions that sat beneath those big questions. See pages 17–19 of their report for more information about their research methodology.

<sup>7</sup> The Measurable Gains Framework is a tool that the Ministry of Education has developed to enable it to measure and report on progress in implementing *Ka Hikitia*. Although the tool takes a systems-level perspective, it can be adapted for use in schools.



## Readings and resources

### Principles for evaluating gifted and talented programmes

In their evaluation of five New Zealand programmes for gifted and talented students, Riley and Moltzen (2010) stress the “critical importance [of] the dynamic relationship between programme development and evaluation, with each informing and shaping the other” (page 10). They identify the following guiding principles for the evaluation of gifted and talented programmes:

- the measurement of both student outcomes and programme effectiveness;
- the utilisation of a variety of qualitative and quantitative data collection methods matched to programme goals;
- and the involvement of key stakeholders in both planning and undertaking the evaluation.

However, they also identify issues that need to be considered. These include the difficulty of measuring outcomes related to students’ social, emotional, affective, and cultural development and the importance of taking into account individual differences before drawing conclusions about a programme’s effect on student outcomes. The report concludes with recommendations for practice and future research that have relevance for all those involved in gifted education.

### Cultural self-review

*The Cultural Self-Review* (Bevan-Brown, 2003) provides a structure and process that teachers from early childhood centres through to secondary schools can use to explore how well they cater for Māori learners, including those with special needs and abilities. Central to the book is a cultural input framework that provides a set of principles for analysing programme components, including environment, personnel, policy, processes, content, resources, assessment, and administration.

#### Summary: Ongoing self-review

- Self-review is a necessary aspect of gifted education. It should use a variety of methods to examine all components of provision and involve the entire school community.
- Self-review must have a clear purpose, be supported by a comprehensive set of written guidelines, and be designed to make changes or adjustments to provision in light of its outcomes.
- Improved student outcomes are the key indicators for decisions about changes or adjustments.
- Self-review should be both formative and summative.

# Recommended readings

## Books

Allan, B. (2002). *Identifying and Providing for Giftedness in the Early Years*. Palmerston North: Kanuka Grove Press.

Based on New Zealand research, this resource provides an overview of giftedness in the early years, including a behavioural rating scale for young children.

Cathcart, R. (2005). *They're Not Bringing My Brain Out: Understanding and Working with Gifted and Talented Learners*, 3rd ed. Auckland: Hodder Education.

The REACH model, designed in New Zealand, is explored alongside a range of topics related to gifted and talented learners and practical strategies for teachers and parents.

Clark, B. (2008). *Growing Up Gifted: Developing the Potential of Children at Home and School*, 7th ed. Upper Saddle River, NJ: Merrill Prentice Hall.

This comprehensive book provides readers with an understanding of the many facets of “growing up gifted” and includes advice on nurturing the ability of young people.

Colangelo, N. and Davis, G. (2003). *Handbook of Gifted Education*, 3rd ed. Boston: Allyn and Bacon.

Featuring well-known scholars in the field, this book provides international perspectives grounded in sound research as well as practical applications.

Davis, G., Rimm, S., and Siegle, D. (2011). *Education of the Gifted and Talented*, 6th ed. Upper Saddle River, N.J.: Pearson.

This text provides a comprehensive view of gifted education. Although US-based, the book is relevant to the New Zealand context because it encompasses everything from curriculum models to programme evaluation. It provides specific information in a detailed fashion, with many excellent appendices of examples.

Gross, M. U., MacLeod, B., Drummond, D., and Merrick, C. (2003). *Gifted Students in Primary Schools: Differentiating the Curriculum*. Sydney: University of New South Wales, GERRIC.

This resource is a teacher-friendly publication from Australia that offers practical guidance in developing differentiated curriculum for gifted students, including units of study.

Gross, M. U., MacLeod, B., and Pretorius, M. (2001). *Gifted Students in Secondary Schools: Differentiating the Curriculum*. Sydney: University of New South Wales, GERRIC.

This Australian publication is designed to provide teachers with a blueprint for designing differentiated curriculum for gifted students in grades 7–12.

Harrison, C. (1999). *Giftedness in Early Childhood*. Sydney: University of New South Wales, GERRIC.

Published in Australia, this book offers teachers of young gifted children insights into their development, appropriate identification, and programming for special abilities.

Karnes, F. A. and Bean, S. M. (2009). *Methods and Materials for Teaching the Gifted*, 3rd ed. Waco, Texas: Prufrock Press.

This American book provides detailed information on how to teach gifted and talented students and includes a wide array of practical ideas and resources.

- Knudson, D. (2006). *Gifted Education in New Zealand Primary Schools 1878–2005*. Wellington: New Zealand Council for Educational Research.  
This book provides a historical overview of the development of gifted education in New Zealand, highlighting the ebbs and flows in the pursuit of potential.
- McAlpine, D. and Moltzen, R., eds (2004). *Gifted and Talented: New Zealand Perspectives*, 2nd ed. Palmerston North: Kanuka Grove Press.  
A New Zealand textbook dedicated to issues in gifted and talented education, this is a comprehensive guide to all aspects of the field from the cultural perspective of New Zealand.
- McAlpine, D. and Reid, N. (1996). *Teacher Observation Scales for Identifying Children with Special Abilities*. Wellington: New Zealand Council for Educational Research, and Palmerston North: Massey University ERDC Press.  
These identification scales were developed in New Zealand and designed for classroom teachers at middle primary, intermediate, and junior secondary levels.
- Porter, L. (2005). *Gifted Young Children: A Guide for Teachers and Parents*, 2nd ed. Sydney: Allen and Unwin.  
A valuable Australian resource of practical, research-based ideas for anyone working with young gifted and talented children.
- Riley, T. L. (2011). *Teaching Gifted and Talented Students in the Inclusive Classroom*. Waco, Texas: Prufrock Press.  
Written by a New Zealand-based researcher and educator, this book provides teachers with practical strategies for identifying the abilities, qualities, and needs of gifted and talented students and meeting their needs through differentiation in general classroom settings.
- Rogers, K. B. (2002). *Re-forming Gifted Education: How Parents and Teachers Can Match the Program to the Child*. Scottsdale, Ariz.: Great Potential Press.  
This American book is based on research examining the effectiveness of provisions for gifted and talented students and provides a solid base on which to identify needs and develop a programme to match those.
- Sturgess, A. (2004). *Future Thinking*. Wellington: New Zealand Council for Educational Research.  
This book describes an innovative programme for secondary school students, offering a range of challenging and rewarding educational activities for adolescents.
- Taylor, S. A. (2001). *Gifted and Talented Children: A Planning Guide*. Christchurch: User Friendly Resources.  
This New Zealand-based book guides teachers in developing and implementing school-based programmes as well as inclusive classroom practices.
- Tomlinson, C. A. (2004). *How to Differentiate Instruction in Mixed-ability Classrooms*, 2nd ed. Alexandria, Va.: Association for Supervision and Curriculum Development.  
Written in the United States, this book provides teachers with a range of practical ideas and strategies for differentiated education in all classrooms for all children.

Tomlinson, C. A. (2004). *The Differentiated Classroom: Responding to the Needs of All Learners*. Upper Saddle River, NJ: Prentice Hall.

The common-sense, classroom-driven approach to responsive teaching described in this American book provides teachers with a variety of simple and complex ideas.

Winebrenner, S. (2001). *Teaching Gifted Kids in the Regular Classroom: Strategies and Techniques Every Teacher Can Use to Meet the Academic Needs of the Gifted and Talented* (revised and updated). Minneapolis: Free Spirit Publishing.

A practical, user-friendly guide for teachers striving to meet the needs of gifted and talented students in all classrooms.

## Journals

### ***APEX: The New Zealand Journal of Gifted Education***

Published by the New Zealand Association for Gifted Children, this journal features research and practice in the area of gifted education within New Zealand. The journal is written as a review of current ideas and teaching practices and is designed to meet the needs of teachers, school administrators, and parents.

### ***Australasian Journal of Gifted Education***

Published by the Australian Association for the Education of the Gifted and Talented, this refereed journal features articles on research, theory, and practice in the field of gifted education. Additional features are reviews of books and materials.

### ***Gifted and Talented International***

Published by the World Council for Gifted and Talented Children, this peer-reviewed journal provides international examples of research, theory, and practice in gifted education.

### ***Gifted Child Quarterly***

Published by the National Association for Gifted Children, this American refereed journal features current research and theory in gifted education. Many of the articles are based on qualitative and quantitative research. The bridge between research and practice is often clearly established for readers.

### ***Gifted Child Today***

This peer-reviewed journal is teacher friendly and contains lots of practical classroom ideas for teachers and parents of children with special abilities. The journal is well received internationally and features the works of many professionals in the field of gifted education.

### ***Gifted Education International***

Published for more than twenty-five years, this peer-reviewed journal provides international perspectives on gifted education within the broader context of uplifting education as a whole.

### ***High Ability Studies***

The official journal of the European Council for High Ability (ECHA), this peer-reviewed publication provides a forum for promoting high ability through research, theory, and practical applications.

***Journal of Advanced Academics***

Formerly *The Journal of Secondary Gifted Education*, this American refereed publication focuses on research, theory, and practices that promote advanced academic achievement for all students.

***Roeper Review***

Produced by the Roeper School (a school for gifted students in Michigan), this journal is one of the best in the field. *Roeper Review* is published monthly and provides readers with an array of research related to both theory and practice in gifted education.

***Tall Poppies***

This journal is published by the New Zealand Association for Gifted Children. It focuses on meeting the needs of parents and teachers. Published four times a year, it features works by parents, practising teachers, and gifted children. It includes announcements of new books, workshops, and programmes.

## Ministry of Education resources

Ministry of Education (2008). *Nurturing Gifted and Talented Children: A Parent–Teacher Partnership*. Wellington: Learning Media. Available online at <http://gifted.tki.org.nz/For-parents-and-whanau>

This guide provides teachers and parents with valuable information and ideas for working together to nurture the abilities of gifted children.

Riley, T., Bevan-Brown, J., Bicknell, B., Carroll-Lind, J., and Kearney, A. (2004). *The Extent, Nature and Effectiveness of Planned Approaches in New Zealand Schools for Providing for Gifted and Talented Students*. Final report. Wellington: Ministry of Education. Available at [www.educationcounts.govt.nz/publications/schooling/5451](http://www.educationcounts.govt.nz/publications/schooling/5451)

This is a New Zealand-based study of identification and approaches to providing for the needs of gifted and talented students, including a literature review, a survey of schools, and case studies.

## Websites

Ministry of Education: [www.minedu.govt.nz](http://www.minedu.govt.nz)

The official homepage of the Ministry of Education, this site includes links to important research and initiatives in education.

TKI Gifted and Talented Online: <http://gifted.tki.org.nz>

A repository of information and materials relevant to the education of gifted and talented students in New Zealand, this website is regularly updated and includes information about news and events for schools and teachers, parents and whānau, and students.



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# Appendices

## Appendix 1: A checklist for school guidelines

### Rationale: Why?

Have you considered your school charter, the National Education Guidelines, the National Administration Guidelines, *The New Zealand Curriculum*, *Ka Hikitia – Managing for Success: the Māori Education Strategy*, the *Pasifika Education Plan*?

Have you addressed:

- Equity and excellence?
- Individual strengths and interests?
- Differentiated learning opportunities?

Does your rationale reflect the general philosophy of your school culture, weaving opportunities for gifted children into the “total fabric” of the school?

### Purposes: What?

Have you considered:

- Defining and identifying gifted children?
- Programmes for gifted children?
- Professional involvement that encompasses ... ?
- All staff with responsibilities and provision of professional development?
- Provision of resources?
- Management/co-ordination, including organisational strategies and evaluation?

### Guidelines: How?

Have you considered principles and pragmatics?

Have you established guidelines for:

- Definition?
- Identification?
- Programmes?
- Organisational strategies?
- Professional involvement?
- Communication?
- Resources?
- Evaluation?

Have you sought input from teachers, parents, the wider community, and students when appropriate?

Does your definition:

- Reflect multi-categorical, contemporary concepts of giftedness?
- Demonstrate awareness of cultural, gender, ethnic, ability considerations?
- Take underachievers into account?
- Include performance as well as potential?
- Mirror your school culture?
- State the necessity for a differentiated education?

Are your identification procedures:

- Begun early and ongoing?
- Systematic?
- Multi-method, with clear statements of who's involved and what tools are used?
- Inclusive rather than exclusive?
- Grounded in a responsive environment approach?

Do your programmes:

- Integrate enrichment and acceleration?
- Stem from a learner base, building on individual strengths and interests?
- Promote differentiation of content, process, product, and learning environment?

Do your organisational strategies:

- Provide a continuum of delivery approaches?
- Use a team approach for co-ordination/management?
- Utilise curriculum models and programmes designed for teaching gifted children?
- Consider scheduling/timetabling, physical space, record-keeping?

Does your professional involvement:

- Include all staff?
- Clearly state responsibilities of staff in regard to identification, programme planning and implementation, programme evaluation, etc.?
- Provide professional development opportunities for all staff?
- Utilise and develop the strengths and interests of individual staff?

Is there open communication with stated mechanisms in place:

- Between home and school?
- Amongst staff, administration, the BoT, and the co-ordinating team?
- With the wider community?

Are resources in place that are:

- Financial?
- Human?
- Physical?
- Suitable for teachers, as well as children?

Does the evaluation account for:

- Student progress?
- Identification and programme practices?
- The principles, programme, and procedures itself?
- Who will be involved and how, using what means?
- Teacher needs and support?

# Appendix 2: School-wide strengths and needs assessment

School: \_\_\_\_\_ Date: \_\_\_\_\_

People present: \_\_\_\_\_

## Introduction

This self-review tool has been developed to assist schools/kura to monitor and evaluate their current provision for gifted and talented students. It is divided into three sections: School Organisation; Definition and Identification; and Effective Teaching and Learning. Schools/kura are encouraged to highlight relevant aspects of their practice from each column in order to identify their current needs and strengths and to prioritise next steps for professional learning and development.

## Section A: School Organisation

1. Professional learning and development				
Minimal professional learning has been undertaken in gifted education.	Introductory professional learning in gifted education is underway for the whole staff.	At least one teacher from each team/department has participated in relevant professional learning.  These teachers have passed ideas and information on to colleagues within their team/department.	Representatives from two or more teams/ departments have participated in relevant professional learning.	All teachers in the school have participated in relevant professional learning and contribute to the wider body of knowledge in gifted education.  An induction process is available for new staff.



1. Professional learning and development				
Professional learning opportunities in gifted education are initiated on the basis of teacher interest.	School leaders support teachers to inquire into aspects of their practice related to gifted students.	Staff capabilities in gifted education have been examined and professional learning planned to meet individual and group needs of staff.	School leaders support teachers with designated responsibility for gifted education to gain specific qualifications.	School leaders actively assess teacher and school capability and needs in gifted education and support ongoing professional learning opportunities for all staff.
Professional learning is driven by external influences, such as MoE recommendations or ERO requirements.	Professional learning is driven by teacher/department/syndicate request, based on anecdotal observations.	Professional learning is driven by identified student needs, based on school-wide achievement data.	Professional learning is driven by data collected on student engagement, well-being, achievement, and progress.	Professional learning is driven by robust self-review and is clearly linked to strategic goals and ongoing staff appraisal.
There is little consideration of the needs and aspirations of parents/whānau of gifted students in making decisions about professional learning.	Parents/whānau are informed about gifted education courses and conferences that may be of interest to them.	Parents/whānau are invited to attend relevant professional learning sessions with staff to share information and foster a common understanding of giftedness and talent.	Parents/whānau, through the BoT, have input into gifted education professional learning initiatives, at both the planning and delivery stages.	Parents/whānau, through the BoT, are involved in reviewing outcomes and setting the direction for future gifted education professional learning initiatives.

2. Guidelines/procedures					
There are no written guidelines/procedures for gifted education.  Out-of-date guidelines/procedures are held on file.	Development/revision of guidelines/procedures is underway in consultation with a small number of staff.  These guidelines/procedures include gifted students who also have special education needs (twice-exceptional students).	Guidelines/procedures are well documented and have been discussed with the whole staff.  These guidelines/procedures are applicable to gifted students at all levels of the school.	Guidelines/procedures are clearly articulated and have been reported to the BoT, parents/whānau, and the wider school community.	Guidelines/procedures have been developed through a collaborative process involving the whole staff and parents/whānau.	
Guidelines/procedures are not used by staff to support practice.	Guidelines/procedures are available and used within each team/department to support practice.	Guidelines/procedures are used by the leadership team to support school-wide practice.	Guidelines/procedures are reviewed and updated to support school-wide practice, as necessary.	Parents/whānau and students are active participants in the review process.	
Guidelines/procedures for gifted students do not reflect Māori/Pasifika perspectives.	Key stakeholders have been identified in the Māori/Pasifika communities and a process of consultation is underway to build relationships.	A parent/whānau group has been established, which includes key members of the school's Māori/Pasifika communities.	Guidelines/procedures for gifted and talented students reflect Māori/Pasifika epistemologies (ways of knowing).	Māori/Pasifika cultural values, beliefs, and practices are embedded in all aspects of the school's guidelines/procedures for gifted students.	

3. Resourcing					
Relevant MoE publications are held on file.  Teachers are aware of MoE sites, such as <a href="http://gifted.tki.org.nz/">http://gifted.tki.org.nz/</a>	Other relevant material and resources are held within teams or departments.	MoE resources are located in a central position and are available to all staff.  Teachers regularly access online resources.	Parents/whānau are provided with access to relevant MoE materials and publications.	Resources are accessible to teachers, parents/whānau, and students, both online and in hard copy format.	
Individual staff members may have gifted education resources for their own use.	Gifted education resources are based on teacher interest and/or availability.	A staff member and/or team has designated responsibility for co-ordinating gifted education resources throughout the school.	Resourcing is clearly aligned to strategic planning in order to meet the identified needs of staff and students.	Parents/whānau and students have input into resource development and share responsibility with the school to provide a range of resources for the community.	
There is no specific budget for gifted education.	Staff with an interest in gifted education volunteer to support individual students or groups.	Gifted education support is planned and budgeted for.  Funding is available for subscriptions to organisations, such as giftEDnz.	Teachers with designated responsibility for gifted education are funded to attend local/regional cluster meetings.	A gifted education coordination position has been established and is fully resourced.	

## Section B: Definition and Identification

4. Definition					
<p>The school does not have a current definition of giftedness and talent.</p> <p>Only a narrow definition of giftedness and talent is used.</p>	<p>An appropriate definition has been developed by a small number of people within the school.</p>	<p>This definition has been discussed and agreed to by the whole staff.</p> <p>This definition acknowledges giftedness across a wide range of domains, not just in traditional academic areas.</p>	<p>Consultation has taken place with the school's community to include their views.</p>	<p>A collaborative development and review process involving parents/whānau, staff, students, and other members of the school community has been implemented.</p>	
	<p>The definition does not include Māori/Pasifika perspectives of giftedness and talent.</p>	<p>Consultation with the school's communities has led to an increased awareness of Māori/Pasifika perspectives of giftedness and talent.</p>	<p>Māori/Pasifika theories and conceptions of giftedness and talent are acknowledged and respected and are explicit in the school's definition.</p>	<p>The definition includes culture-specific qualities and abilities valued by the wider school community.</p>	
<p>The definition does not recognise twice-exceptional students.</p>	<p>Relevant professional learning to foster awareness of twice-exceptional students is underway.</p>	<p>Development of partnerships with parents/whānau and outside specialists has led to increased understanding of twice-exceptional students.</p>	<p>The definition includes recognition of twice exceptionality, potential, underachievement, as well as demonstrated performance.</p>	<p>Parents/whānau of twice-exceptional students are consulted in developing the definition.</p>	

5. Identification				
Gifted and talented students are identified solely on the basis of anecdotal data.	Multiple sources of information are used to identify gifted students (e.g., teachers, peers, students, parents/whānau).	Knowledge of the behaviours and characteristics of gifted learners is used to identify students who are currently underachieving (i.e., potential as well as performance).	Staff collaborate with parents/whānau and students to ensure strengths and passions, potential, and barriers to success are identified.	The identification process is rigorous and transparent and is ongoing and systematic throughout the school.
Identification procedures are based mainly on test results and/or student achievement in literacy and mathematics.	Multiple types of evidence are gathered from a variety of sources (e.g., test results, interviews, behavioural checklists, rating scales, student portfolios, competition results).	Valid evidence is used to identify a diverse range of gifted learners, in line with the school's definition.	A GATE register has been established to track provision for gifted students and is broadly representative of the school's population.	The GATE register is maintained and updated regularly to monitor the progress of gifted students throughout the school.
Procedures for identifying gifted Māori/Pasifika students are not culturally responsive.	There is some awareness that language, identity, and cultural knowledge and values need to be considered when identifying gifted Māori/Pasifika students.	A holistic approach to the identification of gifted Māori/Pasifika students is undertaken.	Parents/whānau, as well as kaumātua/falafale and community leaders, are included as an integral part of the identification process.	Māori tikanga and pedagogy and Pasifika culture are valued and respected in all aspects of the identification process.
Identification procedures are not adapted to take into account the special needs of twice-exceptional students (e.g., time constraints or the use of assistive technologies).	Twice-exceptional students have appropriate opportunities to demonstrate their talents and abilities.	Parents/whānau of twice – exceptional students are recognised as experts on their children and are actively involved in the identification process.	Effective links are made with contributing schools and outside organisations (e.g., GSE) to ensure that gifted students are recognised.	Relevant information about gifted students is provided at transition points in their education to ensure their special needs are catered for.



## Section C: Effective Teaching and Learning

6. Teacher practice					
<p>The information gathered during the identification process is not used to inform teacher practice.</p> <p>There is little adaptation of teaching and learning to cater for gifted students.</p>	<p>The information gathered during the identification process is used by teachers to make some adaptations to their classroom practice.</p> <p>These adaptations are not well documented in teacher planning.</p>	<p>The information gathered during the identification process is used by teachers and parents/whānau to set personalised goals.</p> <p>These goals are formally reviewed by classroom teachers.</p>	<p>An individual profile of identified gifted students is held on record.</p> <p>IEPs and/or talent development plans are put in place for gifted students who require significant adaptations to the regular classroom programme.</p>	<p>These plans are tracked, monitored, and reviewed by students, teachers, parents/whānau in order to achieve positive outcomes for gifted students.</p>	
<p>Students who complete set tasks ahead of others are provided with more work along the same lines.</p>	<p>Students who complete set tasks ahead of others are given further choices, selected by the teacher.</p>	<p>Students are encouraged to choose/negotiate some of their own learning experiences.</p>	<p>Students are able to pursue self-selected, independent or group, in-depth projects in areas of strength or passion.</p>	<p>Gifted students are involved in co-constructing their own personalised programme of learning.</p>	
<p>Recall and basic information processing dominates learning outcomes.</p> <p>The focus of learning is on mastery of facts and skills.</p>	<p>Some opportunities for higher order thinking are provided.</p> <p>Gifted students have opportunities to think critically and creatively.</p>	<p>Gifted students are regularly involved in philosophical discussions and ethical decision making.</p>	<p>Learning programmes ensure that gifted students have opportunities to focus on conceptual ideas, principles, generalisations, and theories.</p>	<p>Authentic learning projects are designed that deliberately integrate critical, creative, and caring thinking into complex problem-solving tasks.</p>	
<p>Heterogeneous (mixed-ability) grouping is used almost exclusively.</p>	<p>Homogeneous (ability) grouping occurs in some areas of the curriculum, such as literacy or mathematics.</p>	<p>The identified needs and prior learning of gifted students are considered when making grouping decisions.</p>	<p>Flexible grouping (including interest/ability/readiness) is used in a wide range of curriculum areas.</p>	<p>Students are enabled to participate in learning groups outside of their own classroom, where appropriate.</p>	

6. Teacher practice					
Differentiation is limited to literacy and mathematics.	There is some evidence of differentiation across other curriculum areas.	Teacher planning utilises hierarchies, such as Bloom's Taxonomy or the SOLO Taxonomy, to differentiate the complexity of learning tasks.  Subject-specific acceleration is an option for highly gifted students.	Teachers formally multi-level plan and differentiate to ensure that learning activities are tailored to individual needs.  Year-level acceleration is an option for individual gifted students who are capable of achieving at a very high level.	Student learning pathways are reviewed regularly and updated by students and teachers in consultation with parents/whānau.  The future implications of any placement decisions are considered carefully.	
There is limited awareness of the social and emotional needs of gifted students.	Teachers acknowledge and understand the social and emotional needs of gifted students.	Gifted students are provided with regular ongoing opportunities to interact with like-minded peers.	Gifted students are supported to develop a greater awareness and understanding of their giftedness and talent.	Gifted students are actively encouraged to promote positive personal and social change.	
There is some awareness that students' language, identity, and culture need to be considered when providing for gifted Māori/Pasifika students.	Teachers recognise the importance of developing a culturally responsive learning environment that provides relevant opportunities for gifted Māori/Pasifika students to display their abilities.	Māori tikanga and pedagogy and Pasifika cultural knowledge and beliefs are understood, valued, and reflected in all aspects of the school's provision for gifted students.	Gifted Māori/Pasifika students have appropriate opportunities to use their gifts and talents in the service of others, both as individuals and as part of a group.	There is a collective responsibility by all members of the school's community towards teaching and learning that will accelerate the progress and achievement of gifted Māori/Pasifika students.	

7. Provision beyond the regular classroom					
Teachers may be able to describe some opportunities that are available to gifted students.	Gifted students may be nominated to attend outside programmes or to enter inter-school competitions.	Outside agencies are approached for support, where appropriate (e.g., RTLBs, psychologists, specialists).	Expert coaches, tutors, or mentors are invited to work with gifted students.	Flexible pathways through and beyond the school are co-constructed with students and other stakeholders.	
Ad-hoc provision is offered (e.g., occasional withdrawal groups, participation in one-off activities or special events).	Extension opportunities tend to be teacher selected and are dependent on staff who have a particular interest or area of expertise.	Relevant extension opportunities are actively sought and planned for by staff who have an overview or co-ordination responsibility.	Ongoing extension opportunities are provided at all levels of the school.	Extension opportunities are linked to IEPs or talent development plans.	
Parents/whānau are encouraged to investigate other options.	Parents/whānau are fully informed about extension opportunities their children are involved in.	Parents/whānau are involved in making decisions about outside programmes.	Effective links are made between the regular classroom programme and outside programmes.	Outside programmes are evaluated regularly to ensure positive outcomes for gifted students.	Parents/whānau participate in the review process.

## Identified School-wide Priorities for Gifted and Talented Education PLD

Section A: School Organisation	High	Medium	Low	Notes/Next Steps
1. Professional learning and development				
2. Guidelines/procedures				
3. Resourcing				
Section B: Definition and Identification	High	Medium	Low	Notes/Next Steps
4. Definition				
5. Identification				
Section C: Effective Teaching and Learning	High	Medium	Low	Notes/Next Steps
6. Teacher practice				
7. Provision beyond the regular classroom				

## Appendix 3: Recognising giftedness in Māori students: A reflective tool

These indicators and characteristics were developed for use in ONE school. This template needs to be used in consultation with local iwi or significant members of the local Māori community. Changes to these characteristics may be necessary.

Indicator	Characteristics	Where would we see this in our school/community?	How could we nurture this in our school/community?	What do we need to know/ find out?
<p>Manaakitanga: generosity – honouring, caring, and giving mana to people, thus maintaining your own</p>	<p>A student gifted in Manaakitanga will:</p> <ul style="list-style-type: none"> <li>exhibit the capacity and natural inclination to respond, nurture, and care for others;</li> <li>have integrity and mana;</li> <li>have a sense of occasion; be welcoming; demonstrate hospitality;</li> <li>show generosity of spirit; be giving and understand the importance of, and demonstrate, reciprocity;</li> <li>be strong in tautoko qualities (support: value that one person's success is the success of the group).</li> </ul>			



Indicator	Characteristics	Where would we see this in our school/community?	How could we nurture this in our school/community?	What do we need to know/ find out?
Whanaungatanga: family values – relationships	<p>A student gifted in Whanaungatanga will:</p> <ul style="list-style-type: none"> <li>• form, strengthen, and maintain bonds with peers;</li> <li>• value and promote loyalty and inclusiveness;</li> <li>• be a role model, team player, and connect well with others;</li> <li>• demonstrate an awareness of relationships and positions;</li> <li>• be aware of their responsibility, especially in relationship to others;</li> <li>• be strong in tautoko (support: value that one person's success is the success of the group).</li> </ul>			

Indicator	Characteristics	Where would we see this in our school/community?	How could we nurture this in our school/community?	What do we need to know/ find out?
Kaitiakitanga: caretaker/guardianship of knowledge, environment, and resources	<p>A student gifted in Kaitiakitanga:</p> <ul style="list-style-type: none"> <li>• has a very strong awareness of global issues and responsibility;</li> <li>• recognises that human welfare and care for the environment are inextricably linked;</li> <li>• is internally driven with a passion;</li> <li>• is perceptive; aware of the need to nurture and maintain knowledge, environment and resources for the short-term or long-term future;</li> <li>• demonstrates that the needs of others come before self;</li> <li>• may be a gifted storyteller: have an excellent memory, knowledge of and pride in linking whakapapa, iwi, geography.</li> </ul>			

Indicator	Characteristics	Where would we see this in our school/community?	How could we nurture this in our school/community?	What do we need to know/ find out?
Rangatiratanga: ranga – to weave, tira – a company; leadership that inspires unity	<p>A student gifted in Rangatiratanga will:</p> <ul style="list-style-type: none"> <li>• have mana amongst their peers;</li> <li>• be visionary and strategic thinkers: their opinions are sought, valued, and considered;</li> <li>• stand up for beliefs and values, sometimes against adversity;</li> <li>• inspire and motivate others to work for the common good;</li> <li>• show initiative and motivation; see beyond the obvious to recognise what needs to be done;</li> <li>• often have the mandate from the group as the spokesperson; reflect and present controversial ideas with respect.</li> </ul>			

Indicator	Characteristics	Where would we see this in our school/community?	How could we nurture this in our school/community?	What do we need to know/ find out?
Mātauranga: knowledge – intellect, thinking skills, wisdom, education, learned, studious	<p>A student gifted in Mātauranga:</p> <ul style="list-style-type: none"> <li>• has intrinsic motivation and persistence to seek and acquire knowledge;</li> <li>• has advanced thinking skills; thinks critically and creatively;</li> <li>• has effective use of knowledge and intellect;</li> <li>• learns quickly and can transfer knowledge into new contexts;</li> <li>• can problem find, problem solve, and analyse;</li> <li>• is intuitive and visionary;</li> <li>• is acknowledged and sought after for their expertise;</li> <li>• shares knowledge wisely and with discretion;</li> <li>• has ability in language skills, e.g., oral storytelling, excellent memory, knowledge of and pride in whakapapa, iwi, and geography, and can make links.</li> </ul>			

Indicator	Characteristics	Where would we see this in our school/community?	How could we nurture this in our school/community?	What do we need to know/ find out?
Te Mahi Rēhia: Recreational pursuits – physical and artistic performance	<p>A student gifted in Te Mahi Rēhia demonstrates ihi, wehi, and wana (linking appropriate knowledge of whakapapa and iwi to the occasion) and has ability in one or more of the following:</p> <ul style="list-style-type: none"> <li>Visual Arts: (includes Raranga (weaving) Tukutuku, Whakairo (carving) Kowhaiwhai (motifs and symbols);</li> <li>Music: (includes Taonga Puoro); performance and composition;</li> <li>Performing Arts: Waiata, Haka, Karakia, Mau Rākau (traditional weaponry), Toi Whakaari (drama). Whai Kōrero (oratory skills), Karanga, Poi;</li> <li>Sports.</li> </ul>			



Indicator	Characteristics	Where would we see this in our school/community?	How could we nurture this in our school/community?	What do we need to know/ find out?
Tikanga: approved etiquette – correct behaviour, truthful, proper, respectful	<p>A student gifted in Tikanga:</p> <ul style="list-style-type: none"> <li>• can demonstrate initiative and appropriate behaviour before, during, and after events;</li> <li>• has knowledge of protocols, customs, and rituals that demonstrate and reinforce values and beliefs;</li> <li>• maintains, directs, and guides others in appropriate tikanga;</li> <li>• can transfer and appropriately adapt tikanga to a variety of situations and environments.</li> </ul>			

Based on the work of Pita Mahaki and Claire Mahaki (2007)

## Appendix 4: Exploring the components of a Māori concept of giftedness

This tool was initially developed by Angus Macfarlane, who based it on Jill Bevan-Brown's (1996) research. It has been modified for this resource.

Concepts of giftedness	Expansion on meaning	Implications for educator
Giftedness is widely distributed in Māori society. It is not bound by social class, economic status, lineage, or gender.	Range from national heroes to next-door neighbour. Greater expectations in some whānau. Success depends on ability rather than whakapapa.	Don't be influenced by socio-economic status, lineage, gender, or ethnicity. Retain an open mind.
Giftedness can be exhibited in both individual and group contexts. Also, an individual's gifts and talents can be "owned" by a group.	"Self-made man" concept does not fit Māori philosophy. People were conceived and raised and their abilities recognised and nurtured by others. Often whānau sacrifice involved.	Educators should sometimes avoid "seeking out" the most talented musician. Teachers should recognise that while some individuals will shine, it is kotahitanga that prevails.
The areas of giftedness and talent recognised are broad and wide ranging.	The areas include spiritual, cognitive, affective, aesthetic, artistic, musical, social, leadership, and cultural abilities and qualities and may be revealed in the knowledge and behaviours of people in a range of occupations (e.g., academics, league players).	To take cognisance of this third component, educators must not only provide for a wide range of special abilities but they must also consider these abilities from a Māori perspective.
Importance is placed on both qualities and abilities.	Qualities are perceived as positive personal attitudes such as aroha, bravery, and manaakitanga. They are manifest in a person's behaviour. Abilities are perceived as relating to a person's skills (e.g., academic and artistic).	Teachers should be mindful of affective and interpersonal behaviours and be watchful for students who show outstanding abilities. This approach could benefit children of all ethnicities.
The concept of giftedness is holistic in nature and is inextricably intertwined with other Māori concepts.	No ethnic group's concept of giftedness can stand alone from values and beliefs. All knowledge comes from a higher order and is passed down through tohunga. Special abilities are seen as gifts.	Teachers need to value and understand Māori culture. They also need to encourage and extend students in their Māoritanga. Consider designing programmes to be more holistic.

Concepts of giftedness	Expansion on meaning	Implications for educator
There is an inherent expectation that a person's gifts and talents will be used to benefit others.	Gifts are not for personal aggrandisement, but are to be used for the benefit of the Māori community. Gifts bring with them inherent responsibilities and a commitment to reciprocate and be accountable.	Look for students who are "being of service". Provide opportunities where this quality can surface and develop (e.g., peer tutoring, peer mediation, writing books for kōhanga reo, concerts at retirement homes, working bees on marae).
The Māori culture provides a firm foundation on which giftedness is grounded, nurtured, exhibited, and developed.	The vast majority of special abilities have Māoritanga at their foundation in some way (e.g., te reo competence; the ability to present convincing arguments; the ability to sustain, interest, and entertain an audience).	Give students opportunities and encouragement to develop their talents in a Māori-relevant context (e.g., attend Ngata memorial lectures, Manu Korero oratory festivals, mau taiaha wānanga).
Mana tangata is frequently accorded to people with special abilities, especially in the areas of traditional knowledge and service to others.	Links to concepts of mana: authority, prestige, charisma, awe. Barlow (1991) describes mana tangata as "the power acquired by the individual according to his or her ability and effort to develop skills and gain knowledge in particular areas" (p. 62).	Mana is a potential key to identifying gifted and talented Māori learners. Who are the Māori students who are admired by others? Who have influence among peers? Who have rangatira status? Teachers should provide opportunities from which they can earn mana – conversely, avoid situations where mana can be diminished.

## Appendix 5: How well is your school providing for gifted students from minority cultures?

### Demographics

1. What is the cultural composition of the students in your school? (Give percentage of overall school population for each cultural group.)
2. Does your school have a gifted register and/or programme?
3. If so, what is the ethnicity of the students identified/involved?
4. Do the numbers from each cultural group reflect their proportion within the whole school?
5. If not, which groups are over- or under-represented, and why is this so?

### Concept

6. What are the conceptions of giftedness of the various cultural groups represented in your school?
7. What is your school's definition of giftedness?
8. Does this definition include the essential elements of the cultural conceptions described in question 6?
9. If not, what elements need to be added?

### Identification

10. What methods and measures are used to identify gifted students in your school?
11. Do these include a variety of culturally appropriate approaches that ensure gifted minority students are not overlooked?
12. Are students identified in areas that are highly valued by their cultural group, including cultural skills and abilities?
13. Are both gifted performance and gifted potential identified?
14. Are parents, family, and community members involved in a culturally appropriate way in identifying gifted students?

### Provisions

15. What areas of giftedness are recognised and provided for in your school?
16. Do they take into account differing cultural perspectives, interpretations, values, behaviours, and practices?
17. Do they include the arts, crafts, music, skills, traditions, knowledge, and languages of minority cultures?
18. Do they include abilities and qualities that are highly valued by minority cultures?
19. Are parents, family, and community members consulted about gifted provisions; involved in decision making relating to these provisions and to their children's participation in them; invited to contribute their expertise; and involved in the evaluation of these provisions?

### General

20. In what ways does your school provide a culturally responsive, supportive learning environment which reflects and values cultural diversity?
21. Does the identification and fostering of giftedness in minority culture areas and from multicultural perspectives receive the same priority, status, funding, and time commitment as majority culture input?
22. Are teachers adequately trained to provide for gifted students from all cultures?
23. If not, what in-service education is offered to up-skill and update teachers in respect to testing, assessment, multicultural, and gifted education?
24. Does your school have equity measures to ensure gifted students do not miss out on extension opportunities because of socio-economic factors?
25. Do gifted students from minority groups have access to role models/mentors (real or virtual) from their own culture?

These questions were developed by Bevan-Brown and published on pages 20–21 of Vialle (2011)



## Appendix 6: Action research questions<sup>8</sup>

### What is going on?

- How were decisions around the programme design arrived at? Who was involved in the decision-making process? How has the process impacted upon the sustainability of the programme?
- What changes in climate and philosophy have been required for the successful implementation of this programme? How have professional leaders approached the task of climate change, how were these changes managed, and how were changes in practice achieved?
- How appropriate were the identification procedures, curriculum adaptations, and forms of assessment in relation to the goals of the programme?
- What aspects of curriculum differentiation have been designed specifically to meet the major objectives of the programme?

### Is it working?

- How appropriate were the identification procedures, curriculum adaptations, and forms of assessment in relation to the goals of the programme? How has this contributed to student outcomes?
- What aspects of curriculum differentiation have been designed specifically to meet the major objectives of the programme? To what extent has this specific programme design contributed to improved student outcomes?

### How do we know?

- How comprehensive are provider-initiated student and programme monitoring and evaluations? How do the findings of the monitoring or evaluation inform the programme?
- What is the evidence for improved student learning and social, emotional, or cultural outcomes as a result of participation in the programme?
- How have resources and personnel impacted on the success or otherwise of the programme?
- What role has staff professional development played in achieving programme goals?
- How well has the programme planning occurred in regard to sustainability?
- What has the impact of the programme been on the whole organisation?

<sup>8</sup> Riley and Moltzen (2010) used these questions in their evaluation of three Ignite Talent Development Initiatives.